

# BRAIN

## Rejuvenation Guide



GreenMed*info*  
The Science of Natural Healing

# **GREENMEDINFO'S**

## **BRAIN REJUVENATION GUIDE:**

### **Evidence-Based Strategies Using Food As Medicine**

**BY SAYER JI / GREENMEDINFO**

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*Do stories about Alzheimer's make your blood run cold when you think about how your brain might undergo a steep decline as you enter your senior years? Does it feel like your aging brain is functionally spiraling downward? The good news is, contrary to what you might have heard, the brain CAN heal and even regenerate itself! Not only is this possible, but the progression of neurodegenerative conditions such as dementia, Parkinson's disease, and cognitive decline is preventable—and even reversible. Modern science is continually rewriting the rules of brain health.*

Have you ever wished you could regenerate those brain cells you sacrificed in college? Well, you can! It is a commonly held misconception that the brain is beyond repair. Even the medical establishment has asserted that once we kill brain cells, they are lost forever. Modern science has revealed that the brain is capable of repairing itself, especially when given a little TLC.

In this special GreenMedInfo report, you will learn a number of natural, evidence-based strategies for keeping your brain sharp and healthy as you age. Although it's never too late for the brain to heal, the earlier you begin addressing its particular needs and implementing the right lifestyle modifications, the greater your chances for preventing cognitive issues later in life.

The field of cognitive neuroscience is relatively new—only around 100 years old—so it's no surprise we are still honing our understanding of how the brain's neural circuitry works. For the better part of a century, it was said that the brain could not regenerate itself once [damaged](#). Brain cells were considered finite; therefore, any loss or injury could be expected to result in a functional deficiency for the duration of one's life. This created a false belief that the brain is essentially in a perpetual state of decline.

Although compelling evidence to the contrary was presented as early as 1960, medical dogma was (and is) slow to change. In the 1980s, Fernando Nottebohm turned neuroscience on its head. His research at Rockefeller University unequivocally showed that neurogenesis—the production of new nerve cells or neurons—was taking place in the adult vertebrate brain.

Thirty years later, our understanding of the brain's neurocircuitry has taken another quantum leap with the concept of neuroplasticity.

## Our Elastic Brain

The reality of mammalian brain cell regeneration has been firmly established by thousands of scientific studies over the past 25 years. The idea that the adult brain is capable of growing new neurons and glial cells is now widely accepted. Today, we view the brain as resilient and pliable—in other words, *plastic*.

The term [neuroplasticity](#) refers to the ability of the brain to “rewire” itself in response to learning a new skill, changes in the environment, or after an injury. The brain lays down new neural pathways in response to each individual's need. The combination of new cells and new learning is what allows the magic to happen. Neuroplasticity is a way for the brain to fine-tune itself for optimal efficiency and survival.



The process of neuroplasticity is present throughout your lifespan and involves many different processes. It involves creating new neural connections as well as “synaptic pruning”—getting rid of old connections that are no longer necessary or useful.

Neuroplasticity plays a role in everything from learning a new language to healing after a stroke, and even in habitual emotional states. For example, people suffering from depression are literally “wired” for feeling sad and hopeless—but the good news is, the laws of neuroplasticity tell us this wiring can be changed. With the proper mindset and intention, along with the proper nourishment and stimulation, the brain can heal, grow, and adapt at any stage of life.

## The Links Between Inflammation and Brain Disease Grow Stronger

Chronic, dysregulated [Inflammation](#) has been linked to cardiovascular disease, diabetes, cancer, and a wide range of other serious health problems. If left unchecked, inflammation has significant implications for brain function as well. Many scientists believe that over time, inflammation may trigger a cascade of events that culminate in brain shrinkage and potentially [neurodegenerative diseases](#), including dementia.<sup>1</sup> According to prominent holistic psychiatrist Kelly Brogan, MD, many cognitive and mental disorders involve unchecked brain inflammation, especially depression.

In 2017, researchers at Johns Hopkins University School of Medicine concluded, “Inflammation in midlife may be an early contributor to the changes that are associated with Alzheimer’s disease and other forms of dementia.” <sup>2</sup>

One main cause of [neuroinflammation](#) is oxidative damage from free radicals, often secondary to brain toxicity (as provoked by fluoride, mercury, and other common neurotoxins), poor diet, sedentary lifestyle, and overweight/obesity. These all lead to increased oxidative damage and inflammation throughout the body (systemic).

Particularly at issue in diseases such as dementia and [Alzheimer’s disease](#) is the buildup of amyloid plaque between brain cells. Damage from oxidative stress and glycation byproducts have been linked to buildup of this type of plaque. The microglia are immune cells in your brain that prevent and clean up amyloid plaque. Neurons are responsible for the electrical signals, and glial cells keep the neurons healthy by serving regulatory and protective roles, including destruction of pathogens and removal of debris.

When microglia populations are damaged or otherwise compromised, the brain becomes increasingly susceptible to problems such as dementia, schizophrenia, depression, and [cognitive decline](#).

But what is this plaque, really? Two Harvard neuroscientists believe the formation of amyloid plaque is actually a *normal* biological process with *benefits* for your brain.



## Could Alzheimer’s Disease Be the Result of Infection?

Once designated as a villain, beta-amyloid—the protein that clumps into big, gnarly plaques in the brains of Alzheimer’s sufferers—may be a normal byproduct of the immune system. Robert Moir and Rudolph Tanzi believe this type of plaque is actually beneficial—that is, until the brain starts making too much of it. Tanzi writes:<sup>3</sup>

*“Even though we really concentrate on these plaques and tangles in Alzheimer’s disease, it looks like it’s the brain’s immune system — the very primitive immune system of the brain — that’s gone awry, and the plaques and tangles are a part of that system.”*

Although still challenged by the medical establishment, Moir and Tanzi believe beta-amyloid does not *cause* Alzheimer's but is part of the brain's self-healing immune defenses. They have published a series of studies demonstrating how beta-amyloid acts as a potent pathogen-fighter in the brain, and how rodent brains accumulate amyloid plaques within hours of developing an infection. The rodents developing the most plaques live longer. They have also witnessed beta amyloid directly killing pathogens in the lab.<sup>4,5</sup>

It follows that dementia could stem from bacteria or viral infections in the brain. It is also plausible that excessive amyloid plaques could result from the body's immune system getting confused and attacking healthy cells, in some type of autoimmune process. Either way, this opens the door to the possibility of finding ways to interrupt the process before it manifests as Alzheimer's disease.

Brain [calcification](#) may also play a role in Alzheimer's, as well as other neurodegenerative diseases. One of the brain structures that's highly susceptible to calcification is the pineal gland. Alzheimer's patients have been found to have higher rates of [pineal gland calcification](#) than those with other types of dementia. They are also typically deficient in melatonin, which probably comes from suboptimal pineal gland function.

What is driving this calcification? One major culprit is [calcium supplements](#). Most calcium supplements are poor quality and inorganic, derived from limestone, bone, and the shells of oysters and eggs. Unfortunately, [instead of strengthening bones](#), these forms of calcium often become deposited in soft tissues such as the brain and blood vessels. A greater number of brain lesions are found in older adults who use calcium supplements than those who do not.<sup>6</sup>



## The “Brain Drain” You Actually Want

Toxicity is an important player in many (if not most) disease processes, and brain diseases are no exception.

In 2012, scientists at the University of Rochester Medical Center in New York made a remarkable discovery. They determined that our brain has its own unique waste removal system, which they named the “glymphatic system.” Like the lymphatic system, the *glymphatic system* is responsible for flushing out cellular waste and toxic byproducts that would do damage if allowed to build up. The glymphatic system is managed by the brain's glial cells.<sup>7</sup> The scientists responsible for discovering the glymphatic system describe it as follows:<sup>8</sup>

*“The highly organized system acts like a series of pipes that piggyback on the brain’s blood vessels, sort of a shadow plumbing system that seems to serve much the same function in the brain as the lymph system does in the rest of the body – to drain away waste products. This work shows that the brain is cleansing itself in a more organized way and on a much larger scale than has been realized previously.*

*The newly discovered system circulates CSF to every corner of the brain much more efficiently, through what scientists call bulk flow or convection. While the previously discovered system works more like a trickle, percolating CSF through brain tissue, the new system is under pressure, pushing large volumes of CSF through the brain each day to carry waste away more forcefully.”*



Not surprisingly, the substances cleared out by the glymphatic system include beta-amyloid proteins—in fact, it is responsible for removing more than half of your brain’s used-up amyloid proteins. Alzheimer’s disease, then, may involve the failure of this innate biological waste-removal system.

One of the most important things to understand about your brain's glymphatic system is that it appears to function almost exclusively during sleep. This is likely because cleansing is such an energy-intensive activity that it must be performed during the brain's "down time." Toxic proteins are cleared from the brains of mice twice as quickly while asleep as awake.<sup>9</sup> When you sleep, your neurons actually shrink about 60 percent and the channels between them fill with fluid as intercellular waste is flushed out by the glymphatic pumping system.

Because the brain detoxification process is so energy-intensive, it depends on effective [mitochondrial function](#). (Mitochondria are the powerhouses of the cell.) It is not surprising that along with vascular abnormalities, mitochondrial abnormalities are commonly found in those with Alzheimer's disease.<sup>10</sup>

*The bottom line is, improving your [sleep](#) is one of the best things you can do to improve your brain health—and every other facet of your health.*

## Brain-Killing Toxins

Brain toxicity is a major factor in the development of neurodegenerative diseases. In today's world, there is no shortage of neurotoxic agents in our air, food, water, and products. A full accounting is beyond the scope of this report, but I would like to highlight four big ones: fluoride, heavy metals, aspartame, and gluten.

### ♦ FLUORIDE

Fluoride's ability to damage the brain is one of the most active areas of fluoride research today. According to the Fluoride Action Network, more than 300 studies have identified fluoride as a neurotoxin.

[Fluoride](#) is associated with brain damage (especially when coupled with aluminum excess or iodine deficiency), reduced intelligence, learning disabilities, neurobehavioral deficits, and impaired fetal brain development.



### ♦ ASPARTAME

Study after study confirms that [aspartame](#) can damage the brain and central nervous system, as well as being carcinogenic. Aspartame is an excitotoxin, triggering a brain inflammation cycle that plays a critical role in the onset of [Parkinson's disease](#) and other brain diseases.



## ♦ GLUTEN

With increasing recognition among medical professionals and the lay public alike that the health of the gut and brain are intimately connected, the idea that [gluten](#) can damage your brain is beginning to be taken more seriously. It is just logical that something that can harm your gut can also harm your central nervous system.



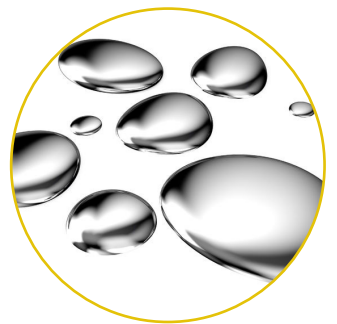
Neurotoxicity is one of gluten's primary health-damaging effects. In fact, gluten can do harm to the brain even if you have no intestinal symptoms.

A 2013 study published in the *Journal of Neurology, Neurosurgery and Psychiatry* identified a "new syndrome" within the broader array of so-called "gluten related disorders (GRD)," which the authors called "hyperexcitable brain and refractory [celiac disease](#)." The authors identify neurological dysfunction as one of the most common non-GI manifestations of GRD, with symptoms ranging from headaches to cerebellar ataxia and neuropathy.

Gluten ataxia is an autoimmune condition in which gluten triggers the immune system to attack and damage the cerebellum. Other studies chronicle a wide range of gluten-related neurological symptoms ranging from epilepsy to memory loss and even psychosis.

## ♦ HEAVY METALS

Heavy metals such as [mercury](#), [lead](#), and [aluminum](#) may be a significant factor in the development of Alzheimer's and other forms of dementia, Parkinson's disease, and other brain diseases. Researchers at Emory University showed how metals bind to amyloid proteins in the brain to produce neurotoxicity.<sup>11</sup>



Evidence suggests that aluminum strongly promotes the formation of beta-amyloid plaques, increases oxidative stress and brain inflammation, and accumulates in the regions of the brain most prone to the biomarkers of Alzheimer's disease. Inorganic mercury has been shown to cause the same biochemical hallmarks as Alzheimer's. Evidence also exists for a link between lead exposure early in life and dementia later on.<sup>12</sup>

# The Basics of Brain Health

Now that we've talked about what wreaks havoc in your brain, let's shift our focus to natural brain regenerating strategies. It's back to the basics! We have already discussed the critical importance of sleep for brain detoxification—making sure you are getting adequate restorative sleep is your number one task. Additionally, four other areas stand out: Physical exercise, mental exercise, stress reduction, and fasting.

## ♦ PHYSICAL EXERCISE

When you hear the phrase “train your brain,” you probably don't think of lifting weights. However, it turns out that physical [exercise](#) is one of the best things you can do for both your body and brain.



The brain benefits of exercise are two-fold. First, your brain is a voracious consumer of glucose and oxygen with no ability to store excess energy for later use. A continual supply of these is needed in order to maintain optimal functioning. Physical exercise increases [cerebral blood flow](#) and boosts the delivery of fresh oxygen and glucose to hungry brain cells. A 2014 study revealed that just 30 minutes of moderate cardio is enough to boost cognitive function at any age.

Secondly, moving your body stimulates hippocampal [neurogenesis](#)—meaning, new cell growth in the hippocampus, the brain region where long-term memory and emotions reside. Healthy cell growth in the hippocampus is important towards preventing age-related cognitive decline and dementia.

## ♦ MENTAL EXERCISE

A growing body of literature shows that retaining a sharp, lucid brain means never retiring our critical thinking skills. The largest study to date examining the benefits of cognitive training in older adults was completed in 2014. The study involved nearly 3,000 volunteers and spanned more than a decade.<sup>13</sup>



Participants demonstrated improved brain processing speed and reasoning skills for up to ten years after the completion of the cognitive training program. Tangible brain benefits spilled over into their daily lives, improving their performance on normal daily tasks such as personal finances, meal preparation, and personal care routines. The takeaway is, never stop learning and challenging your mind!

## ♦ STRESS REDUCTION

[Stress](#) is one of the key players in age-related cognitive decline. In today's stressed-out world, continual bathing in fight-or-flight hormones is taking a toll on our brain. This means that engaging in regularly scheduled leisure activities is not just a fun thing to do but an important step towards ensuring optimal brain health.



You don't need to look far to find ways to de-stress! Let your interests guide you. How about playing beautiful music or sitting in quiet contemplation? Or taking a walk in nature? Activities such as yoga, meditation, and [Tai Chi](#) have been shown to lower blood pressure, reduce inflammation, and even mitigate feelings of anxiety and depression.

[Music](#) is another wonderful stress reliever, but it does *even more* for the brain. Research suggests listening to music facilitates brain neurogenesis. Both meditation and music affect the secretion of key hormones that enhance brain plasticity, thus changing the way we respond to stress.

Another fabulous stress-busting technique is [EFT](#), or tapping. EFT is like acupuncture without needles and is easy to learn on your own. It involves gently using your fingers to tap on certain points on the upper body while focusing on a problem or feeling, such as feelings of stress or overwhelm. Studies have shown EFT can quickly and significantly lower cortisol, a key stress hormone, as well as tamping down anxiety and relieving the [effects of trauma](#).<sup>14</sup>

## ♦ FASTING

Overeating is a risk factor for age-related cognitive impairment. However, calorie restriction—even if done intermittently—appears to protect neurons by increasing the body's production of proteins that suppress oxidation and free radicals.



In animal studies, [calorie restriction](#) increases the resistance of brain cells to malfunction and death, thereby reducing the risk of neurodegenerative conditions. Researchers suggest calorie restriction may reduce both the incidence and severity of neurodegenerative disorders in humans. Restricting food intake has been shown to increase the number of newly-generated neural cells in the adult brain—boosting its capacity for self-repair.

[Fasting](#) also offers benefits for sleep, metabolism, detox, inflammation (including in the brain), autoimmunity, and many more. In a [2018 study](#), intermittent fasting was found to protect against menopause-related memory decline. You don't even have to fast every day—restricting calories just a couple days a week may do the trick!

## 8 Great Neuroprotective Foods & Supplements

As with the rest of the body, the brain requires a clean, nutrient-rich diet in order to heal and regenerate itself throughout your lifespan. A handful of foods and supplements rise to the top when it comes to their [neuroprotective](#) benefits. The following are my top eight.

### 1. BROCCOLI POWER

If you really want to kick your brain health up a notch, put some broccoli on your plate! [Broccoli](#) and other sulfur-rich vegetables contain a bundle of antioxidants, as well as a compound called sulforaphane that is documented to be a [neuritogenic substance](#)—one that stimulates nerve growth in the brain. In addition to preventing death and promoting neuron repair, sulforaphane is also a powerful antioxidant and anti-inflammatory agent.



Vegetables containing sulforaphane include broccoli, Brussels sprouts, cabbage, cauliflower, horseradish, kale, kohlrabi, mustard leaves, radish, turnips, watercress, and bok choy. For therapeutic benefit, try to consume at least three cups per day, raw or cooked.

### 2. COCONUT OIL

[Coconut oil](#) may alleviate age-related cognitive deficits and neurodegenerative diseases such as Alzheimer's disease and Parkinson's. Researchers found significant improvements in Alzheimer's patients after 45 to 90 days of treatment with medium chain triglycerides from [coconut oil](#). The primary mechanism of action appears to be prevention and/or reversal of mitochondrial damage in the brain. Coconut oil provides ketone bodies, which function as an alternate fuel for the brain as it becomes more resistant to glucose utilization with age.



### 3. TURMERIC

[Turmeric](#) is well-known as a panacea for everything from calming joint pain and inflammation to reducing heart disease risk. Our awareness of the benefits of this ancient orange root continues to expand.



In terms of the brain and nervous system, [turmeric](#) has well established nerve-regenerative effects due to its being a remyelinating compound. Remyelinating compounds repair the protective sheath around the nerve bundle, known as myelin, an area often damaged in autoimmune and other disorders. Research shows that even small doses of a remyelinating compound can prompt significant nerve regeneration.

[Curcumin](#), the main active ingredient in turmeric, is shown to reduce [oxidative stress](#), boost mitochondrial function, and help mitigate age-related cerebrovascular dysfunction. However, exciting new research reveals that another natural fat-soluble element in turmeric may possess magical properties of its own: [ar-turmerone](#). When brain cells are exposed to ar-turmerone, neural stem cells increase in number and complexity, indicating a healing effect is taking place.

You can take turmeric in supplement form, but it's also delicious in a variety of recipes. The dried powder form is a key spice in curries, but you can now find fresh raw turmeric root in many produce sections. Raw turmeric root can be run through your juicer into fresh juices or grated in salads.

### 4. LION'S MANE MUSHROOM

Did you know there is a medicinal mushroom with [nerve regeneration](#) powers? [Lion's mane mushroom](#) is the only mushroom possessing not just one but TWO nerve growth factors, offering potential benefits for Parkinson's and Alzheimer's disease, mild cognitive impairment, multiple sclerosis, peripheral neuropathy, seizures, leg cramps and more.



Lion's mane stimulates nerve growth factor (NGF), a protein that plays a major role in the maintenance, survival, and regeneration of neurons in both your central and peripheral nervous system. Evidence exists of its benefits for cognition, nerve regeneration, immune function, inflammation, and even digestion. This amazing fungus has been used medicinally in Asia for centuries where it is said to give one "nerves of steel and the memory of a lion."

## 5. GINKGO BILOBA

[Ginkgo biloba](#) is considered a powerhouse in the herbal medicine pharmacopoeia with benefits for more than 100 different diseases. One of [Ginkgo's](#) many properties is stimulating brain-derived neurotrophic factor (BDNF), a protein essential in the regulation, growth, and survival of brain cells. BDNF is especially important for long-term memory. Studies show ginkgo can improve mental health, cognition, memory, alertness, and mental fluidity.



Recently, a new mechanism behind ginkgo's brain healing properties came to light having to do with its effect on neural stem cells. Researchers determined that Ginkgo is able to modulate neural stem cells into the type necessary for the specific region of the brain where BDNF proteins are active.<sup>15</sup> Ginkgo is so effective for the brain that a paper published in 2006 in the [European Journal of Neurology](#) found it as useful in the treatment of Alzheimer's as the drug donepezil (trade name Aricept).

Ginkgo is also a free radical scavenger, improves microcirculation, and reduces platelet aggregation.

## 6. POMEGRANATE

An unexpected ally in the battle against neurodegenerative disease is the [pomegranate](#). Pomegranate juice has been found to boost memory in middle-aged and older adults who experience mild memory problems. Pomegranate has been shown to increase blood flow to task-related regions of the brain.



## 7. GREEN TEA

Along with their many other health benefits, the catechins in [green tea](#) are neuroprotective, stimulating the production of new neurons and helping heal damaged parts of the brain. Therefore, green tea may be beneficial in the prevention and treatment of a variety of degenerative diseases.



## 8. CANNABIS

[Pot for Parkinson's?](#) Maybe so! There is currently no effective conventional treatment for Parkinson's disease. However, [cannabidiol \(CBD\)](#), the non-psychoactive component of cannabis, is showing a good deal of promise. At least three human studies have found CBD to produce positive effects for Parkinson's sufferers, including reducing psychotic symptoms and better quality of life. CBD may protect against the neurotoxin known as MPP(+), believed responsible for the damage to dopamine-producing cells.



## Final Thoughts

Regardless of whatever “bad habits” you may have had enjoyed earlier in life, it is never too late to make positive changes—even where your brain is concerned. The human body is equipped with an amazing capacity to self-heal. All we have to do is provide a little care and support. This report has presented you with some excellent strategies for helping your brain to stay young and healthy. For further information, I encourage you to visit GreenMedInfo's [brain aging research database](#).

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**GREENMEDINFO  
NEURODEGENERATIVE  
DISEASES RESEARCH PDF**

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# Neurodegenerative Diseases

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## Research Subtopics

**Alzheimer's Disease**  
**Amyotrophic Lateral Sclerosis**  
**Dementia**  
**Parkinson's Disease**

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# Overview of Terms Associated with Your Search Topic

287 Relevant Results for Substances

Substance Name	Cumulative Knowledge	Article Count
Ginkgo biloba	178	23
Curcumin	162	93
Vitamin D	105	11
Vitamin B-12	82	10
Folic Acid	64	14
Resveratrol	40	34
Flavonoids	31	16
Cannabinoids	29	20
Polyphenols	25	20
Cannabis	24	10
Vitamin E	84	15
Melatonin	64	21
Coenzyme Q10	63	12
Alpha-Lipoic Acid	42	10
Polyunsaturated Fatty Acids (PUFAs)	31	4
EGCG (Epigallocatechin gallate)	24	19
Bee Venom	23	9
Bacopa	20	11
Nobiletin	13	8

<b>Stilbenes</b>	<b>13</b>	<b>10</b>
<b>Ashwagandha</b>	<b>8</b>	<b>5</b>
<b>Cannabidiol</b>	<b>8</b>	<b>7</b>
<b>Rosemary</b>	<b>7</b>	<b>5</b>
<b>6-Shogaol</b>	<b>6</b>	<b>4</b>
<b>Isoflavones</b>	<b>4</b>	<b>2</b>
<b>Wine</b>	<b>3</b>	<b>2</b>
<b>Red Wine Extract</b>	<b>2</b>	<b>2</b>
<b>Vitamin B-6</b>	<b>42</b>	<b>6</b>
<b>B-complex</b>	<b>33</b>	<b>5</b>
<b>Coconut Oil</b>	<b>25</b>	<b>5</b>
<b>Catechin</b>	<b>20</b>	<b>8</b>
<b>Green Tea</b>	<b>18</b>	<b>8</b>
<b>Anthocyanins</b>	<b>17</b>	<b>6</b>
<b>Coffee</b>	<b>16</b>	<b>7</b>
<b>Pomegranate</b>	<b>16</b>	<b>10</b>
<b>Saffron</b>	<b>16</b>	<b>6</b>
<b>Delta-tetrahydrocannabinol (THC)</b>	<b>14</b>	<b>3</b>
<b>Carotenoids</b>	<b>13</b>	<b>3</b>
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<b>Genistein</b>	<b>9</b>	<b>6</b>
<b>Bamboo</b>	<b>8</b>	<b>5</b>
<b>Thymoquinone</b>	<b>8</b>	<b>7</b>
<b>Astaxanthin</b>	<b>7</b>	<b>7</b>
<b>Citrus Peel</b>	<b>7</b>	<b>4</b>
<b>Quercetin</b>	<b>7</b>	<b>5</b>
<b>Walnut</b>	<b>7</b>	<b>4</b>

Chinese Skullcap	6	4
Ginsenosides	6	4
Silibinin	6	3
Blueberry	5	3
Crocin	4	2
Ferulic acid	3	2
Mulberry	3	2
Fisetin	2	1
Mangosteen	2	2
Nigella sativa (aka Black Seed)	2	2
Rosmarinic acid	2	2
SAMe (S-adenosylmethionine)	32	4
Antioxidant formulas	14	4
Apples	14	3
Huperzine	13	10
Folate	12	2
Glutathione	12	3
Copper	11	2
Fruit: All	11	2
Lutein	11	2
Selenium	11	2
Vegetables: All	11	2
Zinc	11	2
Papaya: Fermented	10	1
Piperidines	10	1
Vitamin C	10	6
Olive Oil	9	4
Ginger	8	5

<b>Black Pepper</b>	<b>7</b>	<b>4</b>
<b>Cinnamon</b>	<b>6</b>	<b>5</b>
<b>DHA (Docosahexaenoic Acid)</b>	<b>6</b>	<b>5</b>
<b>Luteolin</b>	<b>6</b>	<b>4</b>
<b>Spirulina</b>	<b>6</b>	<b>3</b>
<b>Apigenin</b>	<b>5</b>	<b>4</b>
<b>Caprylic Acid</b>	<b>5</b>	<b>2</b>
<b>Creatine</b>	<b>5</b>	<b>3</b>
<b>Fucoidan</b>	<b>5</b>	<b>4</b>
<b>Goji</b>	<b>5</b>	<b>4</b>
<b>Long Pepper</b>	<b>5</b>	<b>3</b>
<b>Rice Bran</b>	<b>5</b>	<b>3</b>
<b>Theanine</b>	<b>5</b>	<b>3</b>
<b>Amla Fruit</b>	<b>4</b>	<b>2</b>
<b>EPA (Eicosapentaenoic Acid)</b>	<b>4</b>	<b>2</b>
<b>Grape Seed Extract</b>	<b>4</b>	<b>2</b>
<b>Hesperidin</b>	<b>4</b>	<b>3</b>
<b>Moringa oleifera</b>	<b>4</b>	<b>2</b>
<b>Piperine</b>	<b>4</b>	<b>2</b>
<b>Reishi Mushroom</b>	<b>4</b>	<b>2</b>
<b>Rose</b>	<b>4</b>	<b>2</b>
<b>Royal Jelly</b>	<b>4</b>	<b>3</b>
<b>Turmeric</b>	<b>4</b>	<b>3</b>
<b>Ume (Japanese apricot)</b>	<b>4</b>	<b>2</b>
<b>Ursolic Acid</b>	<b>4</b>	<b>2</b>
<b>Arginine</b>	<b>3</b>	<b>2</b>
<b>Carnosic Acid</b>	<b>3</b>	<b>3</b>
<b>Echinacea</b>	<b>3</b>	<b>2</b>
<b>Ellagic Acid</b>	<b>3</b>	<b>2</b>

Garlic	3	3
Isothiocyanate	3	2
Lion's Mane (Hericium Erinaceus)	3	2
Piceatannol	3	2
Rutin	3	2
Schisandra	3	2
Tangeretin	3	2
Bay leaf	2	1
Cannabinoids: Synthetic	2	2
Chokeberry	2	1
Cocoa	2	2
Kava Kava	2	2
Licorice	2	2
Plum	2	1
Soy	2	1
Soy Protein	2	1
Tetrahydrocurcumin	2	1
18 $\beta$ -Glycyrrhetic Acid	1	1
Baicalein	1	1
Chromium	1	1
Cucurbitacin E	1	1
Daidzein	1	1
Fish Oil	1	1
Honokiol	1	1
Hops	1	1
Icariin	1	1
Lychee	1	1
Lysine	1	1

<b>Magnolol</b>	<b>1</b>	<b>1</b>
<b>Marijuana</b>	<b>1</b>	<b>1</b>
<b>Panax Ginseng</b>	<b>1</b>	<b>1</b>
<b>Policosanol</b>	<b>1</b>	<b>1</b>
<b>Poria cocos</b>	<b>1</b>	<b>1</b>
<b>Sesame Seeds</b>	<b>1</b>	<b>1</b>
<b>Vitamin A</b>	<b>1</b>	<b>1</b>
<b>beta-Carotene</b>	<b>1</b>	<b>1</b>
<b>Lavender: Essential Oil</b>	<b>40</b>	<b>3</b>
<b>Mucuna pruriens (aka Velvet Beans)</b>	<b>27</b>	<b>6</b>
<b>NAC (N-acetyl-L-cysteine)</b>	<b>22</b>	<b>3</b>
<b>Omega-3 Fatty Acids</b>	<b>21</b>	<b>3</b>
<b>Vitamin B12: methylcobalamin</b>	<b>21</b>	<b>3</b>
<b>Carnitine, Acetyl-L-</b>	<b>20</b>	<b>2</b>
<b>Sage</b>	<b>20</b>	<b>2</b>
<b>Progesterone</b>	<b>15</b>	<b>4</b>
<b>Testosterone</b>	<b>14</b>	<b>3</b>
<b>Medium Chain Triglycerides</b>	<b>13</b>	<b>2</b>
<b>Phosphatidylserine</b>	<b>12</b>	<b>2</b>
<b>Caffeine</b>	<b>11</b>	<b>2</b>
<b>Coconut</b>	<b>11</b>	<b>2</b>
<b>Cholesterol</b>	<b>10</b>	<b>1</b>
<b>Curry Spice</b>	<b>10</b>	<b>1</b>
<b>GlyceroPhosphoCholine (alpha-GPC)</b>	<b>10</b>	<b>1</b>
<b>Green Coffee Bean</b>	<b>10</b>	<b>1</b>
<b>Lavender</b>	<b>10</b>	<b>1</b>
<b>Melissa (Lemonbalm)</b>	<b>10</b>	<b>1</b>
<b>Monounsaturated fatty acids</b>	<b>10</b>	<b>1</b>

<b>Rosemary: Essential Oil</b>	<b>10</b>	<b>1</b>
<b>Sea Cucumber</b>	<b>10</b>	<b>1</b>
<b>Silica</b>	<b>10</b>	<b>1</b>
<b>Silica: Orthosilicic acid</b>	<b>10</b>	<b>1</b>
<b>Superoxide dismutase</b>	<b>10</b>	<b>1</b>
<b>Thiamine (B-1)</b>	<b>10</b>	<b>1</b>
<b>Whey</b>	<b>10</b>	<b>1</b>
<b>Glycoaminoglycans</b>	<b>8</b>	<b>4</b>
<b>Insulin-like Growth Factor (IGF-1)</b>	<b>7</b>	<b>4</b>
<b>Acetyl-L-carnitine</b>	<b>5</b>	<b>3</b>
<b>Amurensin G</b>	<b>5</b>	<b>1</b>
<b>Magnesium</b>	<b>5</b>	<b>3</b>
<b>Oleocanthal</b>	<b>5</b>	<b>1</b>
<b>Lycopene</b>	<b>4</b>	<b>2</b>
<b>Melanin: Bacterial</b>	<b>3</b>	<b>2</b>
<b>Multivitamin</b>	<b>3</b>	<b>1</b>
<b>Persimmon</b>	<b>3</b>	<b>2</b>
<b>Probiotics</b>	<b>3</b>	<b>2</b>
<b>Turmerones</b>	<b>3</b>	<b>2</b>
<b>5-HTP (5-Hydroxytryptophan)</b>	<b>2</b>	<b>1</b>
<b>Amino Acids: Branched Chain</b>	<b>2</b>	<b>1</b>
<b>Angelica</b>	<b>2</b>	<b>1</b>
<b>Antrodia camphorata</b>	<b>2</b>	<b>1</b>
<b>Arctigenin</b>	<b>2</b>	<b>1</b>
<b>Ayurvedic Formulation: Chyawanprash</b>	<b>2</b>	<b>1</b>
<b>Barberry</b>	<b>2</b>	<b>1</b>
<b>Beet</b>	<b>2</b>	<b>1</b>
<b>Berberine</b>	<b>2</b>	<b>1</b>

<b>Bilberry</b>	<b>2</b>	<b>1</b>
<b>Black Tea</b>	<b>2</b>	<b>2</b>
<b>Caffeoylquinic Acids</b>	<b>2</b>	<b>1</b>
<b>Chaenomeles speciosa</b>	<b>2</b>	<b>1</b>
<b>Chrysin</b>	<b>2</b>	<b>1</b>
<b>Coconut Water</b>	<b>2</b>	<b>1</b>
<b>Dopa bean</b>	<b>2</b>	<b>1</b>
<b>Eicosanoyl-5-hydroxytryptamide (EHT)</b>	<b>2</b>	<b>1</b>
<b>Evodia ruteacarpa</b>	<b>2</b>	<b>1</b>
<b>Fig</b>	<b>2</b>	<b>1</b>
<b>Galactooligosaccharides</b>	<b>2</b>	<b>1</b>
<b>Gingerol</b>	<b>2</b>	<b>1</b>
<b>Ginseng (American)</b>	<b>2</b>	<b>1</b>
<b>Gotu Kola</b>	<b>2</b>	<b>2</b>
<b>Grape</b>	<b>2</b>	<b>1</b>
<b>Grapefruit Seed Extract</b>	<b>2</b>	<b>1</b>
<b>Grewia Asiatica</b>	<b>2</b>	<b>1</b>
<b>Kaempferol</b>	<b>2</b>	<b>1</b>
<b>Kiwifruit</b>	<b>2</b>	<b>1</b>
<b>Lignans</b>	<b>2</b>	<b>1</b>
<b>Loquat</b>	<b>2</b>	<b>1</b>
<b>Naringenin</b>	<b>2</b>	<b>1</b>
<b>Niacin</b>	<b>2</b>	<b>1</b>
<b>Nicotinamide adenine dinucleotide (NADH)</b>	<b>2</b>	<b>1</b>
<b>Noni</b>	<b>2</b>	<b>1</b>
<b>Panax Notoginseng</b>	<b>2</b>	<b>1</b>
<b>Peony</b>	<b>2</b>	<b>1</b>
<b>Pomegranate Peel</b>	<b>2</b>	<b>1</b>

<b>Prebiotics</b>	<b>2</b>	<b>1</b>
<b>Prunella vulgaris.</b>	<b>2</b>	<b>1</b>
<b>Psyllium</b>	<b>2</b>	<b>1</b>
<b>Purslane</b>	<b>2</b>	<b>1</b>
<b>Pyruvate</b>	<b>2</b>	<b>1</b>
<b>Radish</b>	<b>2</b>	<b>1</b>
<b>Red Clover</b>	<b>2</b>	<b>1</b>
<b>Red Yeast Rice</b>	<b>2</b>	<b>1</b>
<b>Rhubarb</b>	<b>2</b>	<b>1</b>
<b>Rooibos</b>	<b>2</b>	<b>1</b>
<b>Rosemaric Acid</b>	<b>2</b>	<b>1</b>
<b>Scolopendra subspinipes mutilans</b>	<b>2</b>	<b>1</b>
<b>St. Johns Wort</b>	<b>2</b>	<b>1</b>
<b>Strawberry</b>	<b>2</b>	<b>2</b>
<b>Sweet Potato: Purple</b>	<b>2</b>	<b>1</b>
<b>Tocotrienol: Delta</b>	<b>2</b>	<b>1</b>
<b>Ubiquinol</b>	<b>2</b>	<b>1</b>
<b>Wen Pi Tang</b>	<b>2</b>	<b>1</b>
<b>phytoestrogens</b>	<b>2</b>	<b>1</b>
<b>Acacia catechu</b>	<b>1</b>	<b>1</b>
<b>Achillea fragrantissima</b>	<b>1</b>	<b>1</b>
<b>Allicin</b>	<b>1</b>	<b>1</b>
<b>Broccoli Sprouts</b>	<b>1</b>	<b>1</b>
<b>Brussel sprouts</b>	<b>1</b>	<b>1</b>
<b>Butyrate</b>	<b>1</b>	<b>1</b>
<b>Cardamom</b>	<b>1</b>	<b>1</b>
<b>Carnitine</b>	<b>1</b>	<b>1</b>
<b>Catechols</b>	<b>1</b>	<b>1</b>
<b>Clove</b>	<b>1</b>	<b>1</b>

<b>Codonopsis pilosula</b>	<b>1</b>	<b>1</b>
<b>Coffee: Green/Unroasted</b>	<b>1</b>	<b>1</b>
<b>Colostrum</b>	<b>1</b>	<b>1</b>
<b>Cordyceps Militaris</b>	<b>1</b>	<b>1</b>
<b>Coriander</b>	<b>1</b>	<b>1</b>
<b>Cumin</b>	<b>1</b>	<b>1</b>
<b>Cyanidin</b>	<b>1</b>	<b>1</b>
<b>Daisy</b>	<b>1</b>	<b>1</b>
<b>Elderberry</b>	<b>1</b>	<b>1</b>
<b>Fermented Foods and Beverages</b>	<b>1</b>	<b>1</b>
<b>Fiber</b>	<b>1</b>	<b>1</b>
<b>Ginseng (Siberian)</b>	<b>1</b>	<b>1</b>
<b>Grapes</b>	<b>1</b>	<b>1</b>
<b>Herbal Therapies (Unspecified in Abstracts)</b>	<b>1</b>	<b>1</b>
<b>Honey</b>	<b>1</b>	<b>1</b>
<b>Hydroxytyrosol</b>	<b>1</b>	<b>1</b>
<b>Lithium</b>	<b>1</b>	<b>1</b>
<b>Lotus</b>	<b>1</b>	<b>1</b>
<b>Maple Syrup</b>	<b>1</b>	<b>1</b>
<b>Milk Thistle</b>	<b>1</b>	<b>1</b>
<b>Okra</b>	<b>1</b>	<b>1</b>
<b>Orange: Mandarin</b>	<b>1</b>	<b>1</b>
<b>Papaya</b>	<b>1</b>	<b>1</b>
<b>Patchouli</b>	<b>1</b>	<b>1</b>
<b>Phytate</b>	<b>1</b>	<b>1</b>
<b>Pterostilbene</b>	<b>1</b>	<b>1</b>
<b>Punicalagin</b>	<b>1</b>	<b>1</b>
<b>Raspberry</b>	<b>1</b>	<b>1</b>

Red Pepper	1	1
Red Sage	1	1
Rehmannia	1	1
Rice: Black	1	1
Sweet Cherry	1	1
Tannic Acid	1	1
Tauroursodeoxycholic acid	1	1
Tea	1	1
Theaflavins	1	1
Tibetan Herbal Formula: Padma 28	1	1
Toona sinensis	1	1
Triptolide	1	1
Xanthohumol	1	1
Muira Puama	0	1

46 Relevant Results for Problem Substances

Problem Substance Name	Cumulative Knowledge	Article Count
Donepezil (trade name Aricept)	76	7
Statin Drugs	35	7
Aluminum	13	9
Memantine	52	4
Lead	35	5
Cholinesterase Inhibitor Drugs	24	3
Aluminum Chloride	6	3
Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)	3	2
Galantamine	1	1
Rivastigmine	1	1

<b>Pesticides</b>	<b>42</b>	<b>5</b>
<b>Glyphosate</b>	<b>5</b>	<b>4</b>
<b>Atorvastatin</b>	<b>3</b>	<b>2</b>
<b>Aluminum oxide</b>	<b>2</b>	<b>1</b>
<b>Glyphosate formulations</b>	<b>2</b>	<b>1</b>
<b>Roundup (herbicide)</b>	<b>2</b>	<b>1</b>
<b>Tobacco</b>	<b>20</b>	<b>2</b>
<b>Agricultural Chemicals</b>	<b>10</b>	<b>1</b>
<b>Hydrogenated Oil</b>	<b>10</b>	<b>1</b>
<b>L-glutamic Acid</b>	<b>10</b>	<b>1</b>
<b>Monosodium Glutamate (MSG)</b>	<b>10</b>	<b>1</b>
<b>Nicotine</b>	<b>10</b>	<b>1</b>
<b>Zolpidem (trade name Ambien)</b>	<b>10</b>	<b>1</b>
<b>Lyme's Disease (Borrelia burgdorferi)</b>	<b>9</b>	<b>3</b>
<b>Rotenone</b>	<b>6</b>	<b>2</b>
<b>Sodium Fluoride</b>	<b>5</b>	<b>3</b>
<b>Thimerosal</b>	<b>5</b>	<b>2</b>
<b>Fluoride</b>	<b>4</b>	<b>2</b>
<b>Eptastigmine</b>	<b>3</b>	<b>1</b>
<b>Arsenite</b>	<b>2</b>	<b>1</b>
<b>Cell Phone Exposure</b>	<b>2</b>	<b>1</b>
<b>Lovastatin</b>	<b>2</b>	<b>1</b>
<b>Tamoxifen</b>	<b>2</b>	<b>1</b>
<b>Acetaminophen</b>	<b>1</b>	<b>1</b>
<b>Aluminium Cans</b>	<b>1</b>	<b>1</b>
<b>Cadmium</b>	<b>1</b>	<b>1</b>
<b>Cholesterol Lowering Drugs</b>	<b>1</b>	<b>1</b>
<b>Cow Milk</b>	<b>1</b>	<b>1</b>

<b>Dimethoate</b>	<b>1</b>	<b>1</b>
<b>Excitotoxins</b>	<b>1</b>	<b>1</b>
<b>Gluten</b>	<b>1</b>	<b>1</b>
<b>Paracetamol</b>	<b>1</b>	<b>1</b>
<b>Simvastatin</b>	<b>1</b>	<b>1</b>
<b>Stannous chloride</b>	<b>1</b>	<b>1</b>
<b>Sugary soda</b>	<b>1</b>	<b>1</b>
<b>Zineb</b>	<b>1</b>	<b>1</b>

30 Relevant Results for Therapeutic Actions		
<b>Therapeutic Action Name</b>	<b>Cumulative Knowledge</b>	<b>Article Count</b>
<b>Exercise</b>	<b>150</b>	<b>36</b>
<b>Acupuncture</b>	<b>53</b>	<b>7</b>
<b>Dietary Modification: Low Carbohydrate/Ketogenic</b>	<b>15</b>	<b>5</b>
<b>Exercise: Aerobic</b>	<b>42</b>	<b>5</b>
<b>Music</b>	<b>41</b>	<b>4</b>
<b>Massage/Therapeutic Touch</b>	<b>30</b>	<b>3</b>
<b>Dancing</b>	<b>30</b>	<b>3</b>
<b>Dietary Modification: Mediterranean Diet</b>	<b>20</b>	<b>2</b>
<b>Electroacupuncture</b>	<b>12</b>	<b>2</b>
<b>Light-Emitting Diodes (LEDs) Therapy</b>	<b>3</b>	<b>1</b>
<b>Melodic Intonation Therapy</b>	<b>2</b>	<b>2</b>
<b>Aromatherapy</b>	<b>30</b>	<b>3</b>
<b>Tai Chi</b>	<b>20</b>	<b>2</b>
<b>Stem Cell Related Therapy</b>	<b>15</b>	<b>4</b>
<b>Integrative Medicine</b>	<b>11</b>	<b>2</b>
<b>Acupuncture: auricular</b>	<b>10</b>	<b>1</b>
<b>Animal Therapy</b>	<b>10</b>	<b>1</b>

Exercise: Cycling	10	1
Laughter/Humor	10	1
Loving	10	1
Relaxation Therapy	10	1
Spiritual/Religious Practice	10	1
Sunlight exposure	10	1
Therapeutic Breathing	10	1
Fasting/Caloric Restriction	2	2
Intermittent Hypoxia (low oxygen)	2	1
Light Therapy	2	1
Aquatic therapy	1	1
Craniosacral Therapy	1	1
Dietary Modification: High-Fat/Low-Carbohydrate	1	1

4 Relevant Results for Problematic Actions

Problematic Action Name	Cumulative Knowledge	Article Count
Electromagnetic Fields	22	2
Overdiagnosis	10	1
Nanotechnology	2	1
Western Diet	2	1

211 Relevant Results for Diseases

Disease/Symptom	Cumulative Knowledge	Article Count
Oxidative Stress	150	79
Inflammation	76	22
Brain Inflammation	70	48
Epilepsy	14	4

<b>Stroke: Attenuation/Recovery</b>	<b>8</b>	<b>7</b>
<b>Alzheimer's Disease</b>	<b>1284</b>	<b>376</b>
<b>Parkinson's Disease</b>	<b>528</b>	<b>165</b>
<b>Neurodegenerative Diseases</b>	<b>458</b>	<b>269</b>
<b>Cognitive Decline/Dysfunction</b>	<b>300</b>	<b>59</b>
<b>Vitamin D Deficiency</b>	<b>90</b>	<b>6</b>
<b>Memory Disorders</b>	<b>47</b>	<b>21</b>
<b>High Homocysteine</b>	<b>33</b>	<b>6</b>
<b>Depression</b>	<b>24</b>	<b>5</b>
<b>Diabetes Mellitus: Type 2</b>	<b>20</b>	<b>9</b>
<b>Learning disorders</b>	<b>17</b>	<b>9</b>
<b>Lipid Peroxidation</b>	<b>17</b>	<b>10</b>
<b>Mitochondrial Dysfunction</b>	<b>17</b>	<b>12</b>
<b>Multiple Sclerosis</b>	<b>17</b>	<b>7</b>
<b>Stroke</b>	<b>17</b>	<b>6</b>
<b>Huntington Disease</b>	<b>14</b>	<b>11</b>
<b>Mitochondrial Diseases</b>	<b>11</b>	<b>2</b>
<b>Schizophrenia</b>	<b>7</b>	<b>6</b>
<b>Dementia</b>	<b>571</b>	<b>79</b>
<b>Amyotrophic Lateral Sclerosis</b>	<b>451</b>	<b>102</b>
<b>Aging: Brain</b>	<b>54</b>	<b>17</b>
<b>Anxiety Disorders</b>	<b>33</b>	<b>4</b>
<b>Brain: Microglial Activation</b>	<b>33</b>	<b>17</b>
<b>Brain: Oxidative Stress</b>	<b>24</b>	<b>16</b>
<b>Lead Poisoning</b>	<b>24</b>	<b>4</b>
<b>Aluminum Toxicity</b>	<b>23</b>	<b>8</b>
<b>Hyperhomocysteinemia</b>	<b>20</b>	<b>2</b>
<b>Lipopolysaccharide-Induced Toxicity</b>	<b>15</b>	<b>12</b>

<b>Amyotrophic lateral sclerosis (ALS)</b>	<b>14</b>	<b>12</b>
<b>Autoimmune Diseases</b>	<b>11</b>	<b>2</b>
<b>Tremor</b>	<b>11</b>	<b>2</b>
<b>Neurologic Disorders</b>	<b>9</b>	<b>7</b>
<b>Memory Disorders: Drug-Induced</b>	<b>8</b>	<b>4</b>
<b>Neurotoxicity</b>	<b>6</b>	<b>4</b>
<b>Parkinsonism</b>	<b>5</b>	<b>3</b>
<b>Psychiatric Disorders</b>	<b>4</b>	<b>4</b>
<b>Dopamine Toxicity</b>	<b>3</b>	<b>2</b>
<b>Spinal Cord Injuries</b>	<b>3</b>	<b>3</b>
<b>Bradycardia</b>	<b>43</b>	<b>3</b>
<b>Quality of Life: Poor</b>	<b>30</b>	<b>3</b>
<b>Memory Loss</b>	<b>24</b>	<b>8</b>
<b>Cancers: All</b>	<b>21</b>	<b>17</b>
<b>Dementia: Alzheimer Type</b>	<b>21</b>	<b>2</b>
<b>C-Reactive Protein</b>	<b>20</b>	<b>1</b>
<b>Osteoporosis</b>	<b>20</b>	<b>2</b>
<b>Sitting Sickness</b>	<b>20</b>	<b>2</b>
<b>Parkinsonian Disorders</b>	<b>13</b>	<b>8</b>
<b>Cerebrovascular Disorders</b>	<b>12</b>	<b>2</b>
<b>Circadian Dysregulation</b>	<b>12</b>	<b>3</b>
<b>Depressive Disorder</b>	<b>12</b>	<b>3</b>
<b>Pineal Gland Calcification</b>	<b>12</b>	<b>3</b>
<b>Celiac Disease</b>	<b>11</b>	<b>2</b>
<b>Elderly: Age Specific Diseases</b>	<b>11</b>	<b>2</b>
<b>Aging</b>	<b>10</b>	<b>7</b>
<b>Childhood Chemical Exposures</b>	<b>10</b>	<b>1</b>
<b>Childhood Cognitive Disorders</b>	<b>10</b>	<b>1</b>

<b>Lewy Body Disease</b>	<b>10</b>	<b>1</b>
<b>Supranuclear Palsy: Progressive</b>	<b>10</b>	<b>1</b>
<b>Brain Damage</b>	<b>9</b>	<b>6</b>
<b>Cardiovascular Diseases</b>	<b>9</b>	<b>9</b>
<b>Excitotoxicity</b>	<b>6</b>	<b>4</b>
<b>Pesticide Toxicity</b>	<b>6</b>	<b>5</b>
<b>Obesity</b>	<b>5</b>	<b>5</b>
<b>Amnesia: Drug-Induced</b>	<b>4</b>	<b>2</b>
<b>Estrogen Deficiency</b>	<b>4</b>	<b>2</b>
<b>Brain Injury: Hippocampal Damage</b>	<b>3</b>	<b>2</b>
<b>Creutzfeldt-Jakob disease</b>	<b>3</b>	<b>2</b>
<b>DNA damage</b>	<b>3</b>	<b>2</b>
<b>Folic Acid/Folate Deficiency</b>	<b>3</b>	<b>2</b>
<b>Iron Overload</b>	<b>3</b>	<b>2</b>
<b>Prion Diseases</b>	<b>3</b>	<b>2</b>
<b>Substantia Nigra: Damage</b>	<b>3</b>	<b>2</b>
<b>Dysbiosis</b>	<b>2</b>	<b>2</b>
<b>Glyphosate Toxicity</b>	<b>2</b>	<b>2</b>
<b>High Cholesterol</b>	<b>2</b>	<b>1</b>
<b>Inflammation: Brain</b>	<b>2</b>	<b>1</b>
<b>Macular Degeneration</b>	<b>2</b>	<b>2</b>
<b>Perimenopausal Syndrome</b>	<b>2</b>	<b>1</b>
<b>Postmenopausal Disorders: Weight Gain/Obesity</b>	<b>2</b>	<b>1</b>
<b>Stroke: Ischemic</b>	<b>2</b>	<b>2</b>
<b>Aphasia</b>	<b>1</b>	<b>1</b>
<b>Apraxias</b>	<b>1</b>	<b>1</b>
<b>Dopamine Levels: Low</b>	<b>1</b>	<b>1</b>
<b>HSV-1</b>	<b>1</b>	<b>1</b>
<b>Olfaction Disorders</b>	<b>1</b>	<b>1</b>

<b>Pancreas-Brain Axis Dysfunction</b>	<b>1</b>	<b>1</b>
<b>Pancreatic Diseases</b>	<b>1</b>	<b>1</b>
<b>Striatonigral Degeneration: Autosomal Dominant</b>	<b>1</b>	<b>1</b>
<b>Toxoplasma gondii Infection</b>	<b>1</b>	<b>1</b>
<b>Toxoplasmosis</b>	<b>1</b>	<b>1</b>
<b>Bacterial Infections</b>	<b>20</b>	<b>1</b>
<b>Chlamydia pneumoniae</b>	<b>20</b>	<b>1</b>
<b>Diarrhea: Drug-Associated</b>	<b>20</b>	<b>1</b>
<b>Epileptic Seizures</b>	<b>20</b>	<b>1</b>
<b>Rheumatoid Arthritis</b>	<b>20</b>	<b>1</b>
<b>Smoking</b>	<b>20</b>	<b>2</b>
<b>Motor Neuron Disease</b>	<b>13</b>	<b>7</b>
<b>Vitamin B 12 Deficiency</b>	<b>11</b>	<b>2</b>
<b>Aggression</b>	<b>10</b>	<b>1</b>
<b>Alzheimer's Disease: Homocysteine Associated</b>	<b>10</b>	<b>1</b>
<b>Bone Fractures</b>	<b>10</b>	<b>1</b>
<b>Demyelinating Diseases</b>	<b>10</b>	<b>1</b>
<b>Endothelial Dysfunction</b>	<b>10</b>	<b>1</b>
<b>High Cortisol</b>	<b>10</b>	<b>1</b>
<b>Hip Fracture</b>	<b>10</b>	<b>1</b>
<b>Homocystinuria</b>	<b>10</b>	<b>1</b>
<b>Neuromuscular Diseases</b>	<b>10</b>	<b>1</b>
<b>Nicotine/Tobacco Toxicity</b>	<b>10</b>	<b>1</b>
<b>Periodontitis</b>	<b>10</b>	<b>1</b>
<b>Pertussis</b>	<b>10</b>	<b>1</b>
<b>Posture Disorders</b>	<b>10</b>	<b>1</b>
<b>Sleep Disorders</b>	<b>10</b>	<b>1</b>
<b>Stress</b>	<b>10</b>	<b>1</b>

<b>Vision Loss</b>	<b>10</b>	<b>1</b>
<b>Whooping Cough</b>	<b>10</b>	<b>1</b>
<b>Dopamine Deficiency</b>	<b>6</b>	<b>4</b>
<b>Amnesia</b>	<b>4</b>	<b>2</b>
<b>Homocysteine: Elevated</b>	<b>4</b>	<b>2</b>
<b>Statin-Induced Pathologies</b>	<b>4</b>	<b>3</b>
<b>Amyloid toxicity</b>	<b>3</b>	<b>2</b>
<b>Autism Spectrum Disorders</b>	<b>3</b>	<b>1</b>
<b>Brain Ischemia</b>	<b>3</b>	<b>2</b>
<b>Bulbar palsy</b>	<b>3</b>	<b>1</b>
<b>Dementia with Lewy bodies (DLB)</b>	<b>3</b>	<b>1</b>
<b>Dyskinesia Syndromes</b>	<b>3</b>	<b>2</b>
<b>Mercury Poisoning</b>	<b>3</b>	<b>1</b>
<b>Advanced Glycation End products (AGE)</b>	<b>2</b>	<b>2</b>
<b>Alcohol Toxicity</b>	<b>2</b>	<b>1</b>
<b>Amphetamine Addiction/Withdrawal</b>	<b>2</b>	<b>1</b>
<b>Amyloid <math>\beta</math> peptide toxicity</b>	<b>2</b>	<b>1</b>
<b>Amyloidosis</b>	<b>2</b>	<b>1</b>
<b>Blood-Brain-Barrier Disorders</b>	<b>2</b>	<b>1</b>
<b>Cell Phone Induced Disease</b>	<b>2</b>	<b>1</b>
<b>Central Nervous System Diseases</b>	<b>2</b>	<b>2</b>
<b>Cerebral Hypoperfusion</b>	<b>2</b>	<b>1</b>
<b>Diabetes Mellitus: Type 2: Prevention</b>	<b>2</b>	<b>2</b>
<b>Dyslipidemias</b>	<b>2</b>	<b>2</b>
<b>Fluoride Toxicity</b>	<b>2</b>	<b>1</b>
<b>Herbicide Toxicity</b>	<b>2</b>	<b>1</b>
<b>High Fat Diet</b>	<b>2</b>	<b>1</b>
<b>Infant Chemical Exposures</b>	<b>2</b>	<b>1</b>

<b>Insulin Resistance</b>	<b>2</b>	<b>2</b>
<b>Ischemia</b>	<b>2</b>	<b>1</b>
<b>Lou Gehrig Disease</b>	<b>2</b>	<b>1</b>
<b>Memory Impairment: Hormone Deficiency Induced</b>	<b>2</b>	<b>1</b>
<b>Metabolic Diseases</b>	<b>2</b>	<b>2</b>
<b>Optic Nerve Diseases</b>	<b>2</b>	<b>1</b>
<b>Optical Neuropathy</b>	<b>2</b>	<b>1</b>
<b>Peripheral Neuropathies</b>	<b>2</b>	<b>1</b>
<b>Postmenopausal Disorders</b>	<b>2</b>	<b>1</b>
<b>Postmenopausal Disorders: Memory Impairment</b>	<b>2</b>	<b>1</b>
<b>Radiation Induced Illness</b>	<b>2</b>	<b>1</b>
<b>Seizures</b>	<b>2</b>	<b>1</b>
<b>Seizures: Drug-Induced</b>	<b>2</b>	<b>1</b>
<b>Vaccine-induced Toxicity</b>	<b>2</b>	<b>1</b>
<b>Vitamin C Deficiency</b>	<b>2</b>	<b>1</b>
<b>Abnormalities</b>	<b>1</b>	<b>1</b>
<b>Acne</b>	<b>1</b>	<b>1</b>
<b>Allergy: Cow's Milk</b>	<b>1</b>	<b>1</b>
<b>Anorexia</b>	<b>1</b>	<b>1</b>
<b>Asthma</b>	<b>1</b>	<b>1</b>
<b>Ataxia</b>	<b>1</b>	<b>1</b>
<b>Atherosclerosis</b>	<b>1</b>	<b>1</b>
<b>Brain Diseases</b>	<b>1</b>	<b>1</b>
<b>Brain Injury: Traumatic</b>	<b>1</b>	<b>1</b>
<b>Bronchitis</b>	<b>1</b>	<b>1</b>
<b>Cadmium Poisoning</b>	<b>1</b>	<b>1</b>
<b>Casein Intolerance</b>	<b>1</b>	<b>1</b>
<b>Chemically-Induced Liver Damage</b>	<b>1</b>	<b>1</b>

<b>Cholesterol: Oxidation</b>	<b>1</b>	<b>1</b>
<b>Common Cold</b>	<b>1</b>	<b>1</b>
<b>Coronary Artery Disease</b>	<b>1</b>	<b>1</b>
<b>Dementia: Vascular</b>	<b>1</b>	<b>1</b>
<b>Diabetes Mellitus: Type 1</b>	<b>1</b>	<b>1</b>
<b>Diabetes: Cognitive Dysfunction</b>	<b>1</b>	<b>1</b>
<b>Diabetes: Oxidative Stress</b>	<b>1</b>	<b>1</b>
<b>Down Syndrome</b>	<b>1</b>	<b>1</b>
<b>Drug-Induced</b>	<b>1</b>	<b>1</b>
<b>Dysphasia</b>	<b>1</b>	<b>1</b>
<b>Endocannabinoid Disorders</b>	<b>1</b>	<b>1</b>
<b>Endocannabinoid System</b>	<b>1</b>	<b>1</b>
<b>Fever</b>	<b>1</b>	<b>1</b>
<b>Gastric Ulcer</b>	<b>1</b>	<b>1</b>
<b>Glial Cell Tumors</b>	<b>1</b>	<b>1</b>
<b>Glioblastoma</b>	<b>1</b>	<b>1</b>
<b>Gram-Negative Bacterial Infections</b>	<b>1</b>	<b>1</b>
<b>Gram-Positive Bacterial Infections</b>	<b>1</b>	<b>1</b>
<b>Heart Failure</b>	<b>1</b>	<b>1</b>
<b>Heavy Metal Toxicity</b>	<b>1</b>	<b>1</b>
<b>Hydrogen Peroxide Induced Toxicity</b>	<b>1</b>	<b>1</b>
<b>Hyperinsulinism</b>	<b>1</b>	<b>1</b>
<b>Hypertension</b>	<b>1</b>	<b>1</b>
<b>Insulin-like Growth Factor (IGF): Elevated</b>	<b>1</b>	<b>1</b>
<b>Lewy Body Parkinson Disease</b>	<b>1</b>	<b>1</b>
<b>Liver Cirrhosis</b>	<b>1</b>	<b>1</b>
<b>Liver Damage</b>	<b>1</b>	<b>1</b>
<b>Liver Damage: Drug-Induced</b>	<b>1</b>	<b>1</b>
<b>Liver Disease</b>	<b>1</b>	<b>1</b>

<b>Magnesium Deficiency</b>	<b>1</b>	<b>1</b>
<b>Metabolic Syndrome X</b>	<b>1</b>	<b>1</b>
<b>Molecular Pathologies: Dolichol Depletion</b>	<b>1</b>	<b>1</b>
<b>Motor Neuron Disease: Amyotrophic Lateral Sclerosis</b>	<b>1</b>	<b>1</b>
<b>Myocardial Ischemia</b>	<b>1</b>	<b>1</b>
<b>Neuroblastoma</b>	<b>1</b>	<b>1</b>
<b>Neurodevelopmental Disorders</b>	<b>1</b>	<b>1</b>
<b>Periodontal Diseases</b>	<b>1</b>	<b>1</b>
<b>Traumatic Brain Injury</b>	<b>1</b>	<b>1</b>

96 Relevant Results for Pharmacological Actions		
<b>Pharmacological Action Name</b>	<b>Cumulative Knowledge</b>	<b>Article Count</b>
<b>Neuroprotective Agents</b>	<b>889</b>	<b>435</b>
<b>Antioxidants</b>	<b>270</b>	<b>150</b>
<b>Anti-Inflammatory Agents</b>	<b>100</b>	<b>74</b>
<b>Neurorestorative</b>	<b>13</b>	<b>8</b>
<b>Anti-Apoptotic</b>	<b>45</b>	<b>29</b>
<b>Neuritogenic</b>	<b>40</b>	<b>18</b>
<b>Apoptotic</b>	<b>32</b>	<b>26</b>
<b>Superoxide Dismutase Up-regulation</b>	<b>31</b>	<b>19</b>
<b>Nitric Oxide Inhibitor</b>	<b>19</b>	<b>7</b>
<b>NF-kappaB Inhibitor</b>	<b>18</b>	<b>14</b>
<b>Neurogenesis</b>	<b>16</b>	<b>10</b>
<b>Antidepressive Agents</b>	<b>51</b>	<b>4</b>
<b>Tumor Necrosis Factor (TNF) Alpha Inhibitor</b>	<b>22</b>	<b>18</b>
<b>Anti-Anxiety Agents</b>	<b>21</b>	<b>2</b>
<b>Enzyme Inhibitors</b>	<b>16</b>	<b>12</b>

<b>Cholinesterase Inhibitors</b>	<b>6</b>	<b>5</b>
<b>Catalase Up-Regulation</b>	<b>5</b>	<b>3</b>
<b>Antineoplastic Agents</b>	<b>4</b>	<b>3</b>
<b>Immunomodulatory</b>	<b>4</b>	<b>4</b>
<b>Neuroplasticity enhancement</b>	<b>4</b>	<b>2</b>
<b>Cytoprotective</b>	<b>2</b>	<b>2</b>
<b>Nonpeptidyl Inhibitors</b>	<b>1</b>	<b>1</b>
<b>SIRT1 Activator</b>	<b>1</b>	<b>1</b>
<b>Interleukin-1 beta downregulation</b>	<b>17</b>	<b>12</b>
<b>Antiproliferative</b>	<b>12</b>	<b>10</b>
<b>Acetylcholinesterase Inhibitor</b>	<b>11</b>	<b>7</b>
<b>Anticonvulsants</b>	<b>11</b>	<b>2</b>
<b>Cardiovascular Agents</b>	<b>11</b>	<b>2</b>
<b>Cyclooxygenase 2 Inhibitors</b>	<b>9</b>	<b>7</b>
<b>Interleukin-6 Downregulation</b>	<b>8</b>	<b>6</b>
<b>Nrf2 activation</b>	<b>6</b>	<b>6</b>
<b>Tumor Suppressor Protein p53 Upregulation</b>	<b>6</b>	<b>3</b>
<b>Proteasome Inhibitors</b>	<b>5</b>	<b>4</b>
<b>Anticarcinogenic Agents</b>	<b>4</b>	<b>3</b>
<b>Antiparkinson Agents</b>	<b>4</b>	<b>2</b>
<b>Cardioprotective</b>	<b>4</b>	<b>4</b>
<b>Dopaminergic</b>	<b>4</b>	<b>3</b>
<b>Heme oxygenase-1 up-regulation</b>	<b>4</b>	<b>4</b>
<b>NF-E2-Related Factor-2 (Nrf2) Modulator</b>	<b>4</b>	<b>3</b>
<b>Prophylactic Agents</b>	<b>4</b>	<b>2</b>
<b>Autophagy Inhibitors</b>	<b>3</b>	<b>2</b>
<b>Genoprotective</b>	<b>3</b>	<b>2</b>
<b>Hypolipidemic</b>	<b>3</b>	<b>2</b>

Malondialdehyde Down-regulation	3	2
Enzyme Activators	2	1
Hepatoprotective	2	2
Prostaglandin PGE2 downregulation	2	2
Regenerative	2	2
Chelating Agents	1	1
Dopamine Antagonists	1	1
Dopamine Receptor D3 Antagonist	1	1
Estrogen Receptor Agonist	1	1
Interferon Inducers	1	1
Interleukin-10 upregulation	1	1
Calcium Channel Blockers	10	1
Detoxifier	10	1
Interleukin-6 upregulation	10	1
Bcl-2 protein down-regulation	3	2
MicroRNA modulator	3	2
Wnt/ $\beta$ -catenin signaling pathway modulation	3	2
Anxiolytic	2	1
Autophagy Up-regulation	2	2
Chemopreventive	2	2
Cholinergic Agents	2	1
Epidermal growth factor receptor (EGFR) inhibitor	2	1
Excitatory Amino Acid Agonists	2	1
Glutathione Upregulation	2	1
Heat Shock Protein Inducer	2	1
Insulin Receptor Modulator	2	1
Interleukin-4 downregulation	2	1
Monoamine Oxidase Inhibitors	2	1

<b>Platelet Aggregation Inhibitors</b>	<b>2</b>	<b>1</b>
<b>Prostaglandin Antagonists</b>	<b>2</b>	<b>1</b>
<b>Angiogenesis Inducing Agents</b>	<b>1</b>	<b>1</b>
<b>Angiogenesis Inhibitors</b>	<b>1</b>	<b>1</b>
<b>Anti-Angiogenic</b>	<b>1</b>	<b>1</b>
<b>Anti-Bacterial Agents</b>	<b>1</b>	<b>1</b>
<b>Anti-Platelet</b>	<b>1</b>	<b>1</b>
<b>Anti-atherogenic</b>	<b>1</b>	<b>1</b>
<b>Anti-cancer</b>	<b>1</b>	<b>1</b>
<b>Anti-metastatic</b>	<b>1</b>	<b>1</b>
<b>Anticholesteremic Agents</b>	<b>1</b>	<b>1</b>
<b>Antifungal Agents</b>	<b>1</b>	<b>1</b>
<b>DNA Repair Up-regulation</b>	<b>1</b>	<b>1</b>
<b>Estrogen Receptor Modulators</b>	<b>1</b>	<b>1</b>
<b>Glycogen synthase kinase-3beta (GSK-3beta) Inhibitor</b>	<b>1</b>	<b>1</b>
<b>Histone deacetylase inhibitor</b>	<b>1</b>	<b>1</b>
<b>Iron Chelating Agents</b>	<b>1</b>	<b>1</b>
<b>Matrix metalloproteinase-9 (MMP-9) inhibitor</b>	<b>1</b>	<b>1</b>
<b>Neuromodulatory</b>	<b>1</b>	<b>1</b>
<b>Phase II Detoxification Enzyme Inducer</b>	<b>1</b>	<b>1</b>
<b>Postaglandin PGE2 downregulation</b>	<b>1</b>	<b>1</b>
<b>Telomerase Inhibitor</b>	<b>1</b>	<b>1</b>
<b>Transient Receptor Potential Melastatin 2 Inhibition</b>	<b>1</b>	<b>1</b>
<b>Vascular Endothelial Growth Factor Inhibitors</b>	<b>1</b>	<b>1</b>
<b>β-secretase Inhibitor</b>	<b>1</b>	<b>1</b>

46 Relevant Results for Keywords

<b>Keyword Name</b>	<b>Cumulative Knowledge</b>	<b>Article Count</b>

<b>Plant Extracts</b>	<b>235</b>	<b>72</b>
<b>Natural Substance Synergy</b>	<b>18</b>	<b>13</b>
<b>Stilbenes</b>	<b>15</b>	<b>13</b>
<b>Phytotherapy</b>	<b>13</b>	<b>5</b>
<b>Risk Reduction</b>	<b>160</b>	<b>33</b>
<b>Diseases that are Linked</b>	<b>101</b>	<b>16</b>
<b>Significant Treatment Outcome</b>	<b>80</b>	<b>9</b>
<b>Dose Response</b>	<b>41</b>	<b>14</b>
<b>Ovariectomy-Induced Changes</b>	<b>8</b>	<b>4</b>
<b>Increased Risk</b>	<b>84</b>	<b>7</b>
<b>Natural Substances Versus Drugs</b>	<b>54</b>	<b>6</b>
<b>Gene Expression Regulation</b>	<b>10</b>	<b>7</b>
<b>Blood Brain Barrier</b>	<b>9</b>	<b>5</b>
<b>Epigenetic Modification</b>	<b>5</b>	<b>4</b>
<b>Dietary Modification</b>	<b>4</b>	<b>2</b>
<b>Drug Synergy</b>	<b>4</b>	<b>2</b>
<b>Donepezil Alternatives</b>	<b>30</b>	<b>3</b>
<b>Therapeutic Action Superior to Drug Therapy</b>	<b>20</b>	<b>2</b>
<b>Proanthocyanidins</b>	<b>12</b>	<b>2</b>
<b>DNA Methylation</b>	<b>5</b>	<b>3</b>
<b>Disease Reversal</b>	<b>4</b>	<b>2</b>
<b>Natural Substance/Drug Synergy</b>	<b>2</b>	<b>2</b>
<b>Anthocyanidins</b>	<b>1</b>	<b>1</b>
<b>Bioenhancer</b>	<b>1</b>	<b>1</b>
<b>Disease Regression</b>	<b>20</b>	<b>2</b>
<b>Superiority of Natural Substances versus Drugs</b>	<b>13</b>	<b>3</b>
<b>Confirm</b>	<b>10</b>	<b>1</b>
<b>Exosomes</b>	<b>10</b>	<b>1</b>

<b>Mind-Body Medicine</b>	<b>10</b>	<b>1</b>
<b>Stem Cell Generation</b>	<b>4</b>	<b>2</b>
<b>Gut-brain Axis</b>	<b>3</b>	<b>2</b>
<b>Gender Differences</b>	<b>2</b>	<b>1</b>
<b>Mitochondrial Biogenesis</b>	<b>2</b>	<b>1</b>
<b>Undefined</b>	<b>2</b>	<b>1</b>
<b>Chemical: Rotenone</b>	<b>1</b>	<b>1</b>
<b>Dietary Concentrations</b>	<b>1</b>	<b>1</b>
<b>Drug Side Effect Attenuation</b>	<b>1</b>	<b>1</b>
<b>Drug-Plant-Vitamin Synergies</b>	<b>1</b>	<b>1</b>
<b>Essential Oils</b>	<b>1</b>	<b>1</b>
<b>Lipopolysaccharide-Induced Damage</b>	<b>1</b>	<b>1</b>
<b>Molecular Mimicry</b>	<b>1</b>	<b>1</b>
<b>Nerve Regeneration</b>	<b>1</b>	<b>1</b>
<b>Regenerative Substances</b>	<b>1</b>	<b>1</b>
<b>Telomere Length</b>	<b>1</b>	<b>1</b>
<b>The Whole is Greater than the Parts</b>	<b>1</b>	<b>1</b>
<b>Trigonelline</b>	<b>1</b>	<b>1</b>

8 Relevant Results for Adverse Pharmacological Actions		
<b>Adverse Pharmacological Action Name</b>	<b>Cumulative Knowledge</b>	<b>Article Count</b>
<b>Neurotoxic</b>	<b>109</b>	<b>30</b>
<b>Excitotoxic</b>	<b>12</b>	<b>2</b>
<b>Immunotoxic</b>	<b>2</b>	<b>1</b>
<b>Inflammatory</b>	<b>2</b>	<b>2</b>
<b>Interleukin-6 up-regulation</b>	<b>2</b>	<b>1</b>
<b>Oxidant</b>	<b>2</b>	<b>2</b>
<b>Apoptotic</b>	<b>1</b>	<b>1</b>

**View the Evidence.**  
**827 Research Articles in Total.**

**Category : Substances**

**18 $\beta$ -Glycyrrhetic Acid (AC 1) (CK 1)**

**Glycyrrhetic acid and E.resveratrolsides are potent compounds having high binding energies which should be considered as potential lead compounds for drug development against PD.**

**Pubmed Data** : Drug Des Devel Ther. 2015 ;9:187-98. Epub 2014 Dec 18. PMID: [25565772](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Muhammad Usman Mirza, A Hammad Mirza, Noor-UI-Huda Ghorri, Saba Ferdous

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : 18 $\beta$ -Glycyrrhetic Acid : CK(1) : AC(1)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163), Parkinsonian Disorders : CK(15) : AC(4)

**Pharmacological Actions** : Dopamine Antagonists : CK(1) : AC(1), Dopamine Receptor D3 Antagonist : CK(1) : AC(1), Neuroprotective Agents : CK(2237) : AC(1053)

**5-HTP (5-Hydroxytryptophan) (AC 1)  
(CK 2)**

**The serotonin precursor 5-HTP improves locomotor**

## function and survival in a mouse model of ALS.

**Pubmed Data** : Amyotroph Lateral Scler Other Motor Neuron Disord. 2003 Sep;4(3):171-6. PMID: [14527871](#)

**Article Published Date** : Sep 01, 2003

**Authors** : B J Turner, E C Lopes, S S Cheema

**Study Type** : Animal Study

**Additional Links**

**Substances** : 5-HTP (5-Hydroxytryptophan) : CK(74) : AC(10)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Lou Gehrig Disease : CK(453) : AC(102)

## 6-Shogaol (AC 4) (CK 6)

**6-S is a novel small molecule activator of Nrf2 in PC12 cells, and suggests that 6-S might be a potential candidate for the prevention of oxidative stress-mediated neurodegenerative disorders.**

**Pubmed Data** : Food Funct. 2015 Aug 5 ;6(8):2813-23. Epub 2015 Jul 14. PMID: [26169810](#)

**Article Published Date** : Aug 04, 2015

**Authors** : Shoujiao Peng, Juan Yao, Yaping Liu, Dongzhu Duan, Xiaolong Zhang, Jianguo Fang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : 6-Shogaol : CK(38) : AC(26)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Heme oxygenase-1 up-regulation : CK(69) : AC(38) , Neuroprotective Agents : CK(2235) : AC(1052) , Nrf2 activation : CK(172) : AC(83)

**6-Shogaol exerts neuroprotective effects on dopaminergic neurons in vitro and in vivo parkinson's disease models.**

**Pubmed Data** : Acta Pharmacol Sin. 2013 Sep ;34(9):1131-9. Epub 2013 Jul 1. PMID: [23811724](#)

**Article Published Date** : Aug 31, 2013

**Authors** : Gunhyuk Park, Hyo Geun Kim, Mi Sun Ju, Sang Keun Ha, Yongkon Park, Sun Yeou Kim, Myung Sook Oh

**Study Type** : Animal Study

**Additional Links**

**Substances** : 6-Shogaol : CK(38) : AC(26)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Parkinson's Disease : CK(525) : AC(163)  
**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Neuroprotective Agents : CK(2235) : AC(1052)  
**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## 6-shogaol is a novel potential therapeutic agent for the treatment of various neurodegenerative diseases, including Alzheimer's disease.

**Pubmed Data** : Biochem Biophys Res Commun. 2016 Aug 12 ;477(1):96-102. Epub 2016 Jun 7.  
PMID: [27286707](#)

**Article Published Date** : Aug 11, 2016

**Authors** : Ji-Young Na, Kibbeum Song, Ju-Woon Lee, Sokho Kim, Jungkee Kwon

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : 6-Shogaol : CK(38) : AC(26)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## 6-shogaol may play a role in inhibiting glial cell activation and reducing memory impairment in animal models of dementia.

**Pubmed Data** : Biochem Biophys Res Commun. 2014 Jun 20 ;449(1):8-13. Epub 2014 May 2.  
PMID: [24796668](#)

**Article Published Date** : Jun 19, 2014

**Authors** : Minho Moon, Hyo Geun Kim, Jin Gyu Choi, Hyein Oh, Paula K J Lee, Sang Keun Ha, Sun Yeou Kim, Yongkon Park, Youngbuhm Huh, Myung Sook Oh

**Study Type** : Animal Study

**Additional Links**

**Substances** : 6-Shogaol : CK(38) : AC(26)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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**Acacia catechu (AC 1) (CK 1)**

## Catechols have anti-inflammatory effects in lipopolysaccharide-stimulated microglia cells, inhibiting neurotoxicity.

**Pubmed Data** : Eur J Pharmacol. 2008 Jun 24;588(1):106-13. Epub 2008 Apr 18. PMID: [18499097](#)

**Article Published Date** : Jun 24, 2008

**Authors** : Long Tai Zheng, Geun-Mu Ryu, Byoung-Mog Kwon, Won-Ha Lee, Kyoungcho Suk

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Acacia catechu : CK(3) : AC(3), Catechols : CK(14) : AC(11)

**Diseases** : Brain: Microglial Activation : CK(82) : AC(53), Brain Inflammation : CK(246) : AC(140), Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Enzyme Inhibitors : CK(463) : AC(250), NF-kappaB Inhibitor : CK(1100) : AC(686), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

## Acetyl-L-carnitine (AC 3) (CK 5)

### Acetyl-L-carnitine delays the mitochondrial decay of aging and improves cognitive function in Alzheimers disease.

**Pubmed Data** : Planta Med. 1999 Apr;65(3):266-8. PMID: [15591008](#)

**Article Published Date** : Apr 01, 1999

**Authors** : Bruce N Ames, Jiankang Liu

**Study Type** : Review

### Additional Links

**Substances** : Acetyl-L-carnitine : CK(211) : AC(36)

**Diseases** : Aging: Brain : CK(246) : AC(84), Alzheimer's Disease : CK(1283) : AC(376)

### R-lipoic acid and acetyl-L-carnitine ameliorate age-associated oxidative damage to the brain, in a rat experimental model.

**Pubmed Data** : Neurochem Res. 2009 Apr;34(4):755-63. Epub 2008 Oct 10. PMID: [18846423](#)

**Article Published Date** : Apr 01, 2009

**Authors** : Jiangang Long, Feng Gao, Liqi Tong, Carl W Cotman, Bruce N Ames, Jiankang Liu

**Study Type :** Animal Study

**Additional Links**

**Substances :** Acetyl-L-carnitine : CK(211) : AC(36), Alpha-Lipoic Acid : CK(462) : AC(106)

**Diseases :** Aging: Brain : CK(246) : AC(84), Alzheimer's Disease : CK(1283) : AC(376), Cognitive Decline/Dysfunction : CK(1138) : AC(212)

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## Vitamin E, acetyl-L-carnitine and $\alpha$ -lipoic acid are superior to the drug donepezil (Aricept) at normalizing biomarkers associated with Alzheimer's disease in an animal model.

**Pubmed Data :** Exp Toxicol Pathol. 2010 Dec 23. Epub 2010 Dec 23. PMID: [21183322](#)

**Article Published Date :** Dec 23, 2010

**Authors :** Hanaa H Ahmed

**Study Type :** Animal Study

**Additional Links**

**Substances :** Acetyl-L-carnitine : CK(211) : AC(36), Alpha-Lipoic Acid : CK(462) : AC(106), Vitamin E : CK(1656) : AC(290)

**Diseases :** Alzheimer's Disease : CK(1283) : AC(376)

**Additional Keywords :** Superiority of Natural Substances versus Drugs : CK(1304) : AC(249)

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## Achillea fragrantissima (AC 1) (CK 1)

### Achillea fragrantissima possesses anti-neuroinflammatory activities for prevention or treatment of neurodegenerative diseases.

**Pubmed Data :** BMC Complement Altern Med. 2011 ;11:98. Epub 2011 Oct 21. PMID: [22018032](#)

**Article Published Date :** Dec 31, 2010

**Authors :** Anat Elmann, Sharon Mordechay, Hilla Erlank, Alona Telerman, Miriam Rindner, Rivka Ofir

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Achillea fragrantissima : CK(2) : AC(2)

**Diseases :** Brain: Microglial Activation : CK(82) : AC(53), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** Anti-Inflammatory Agents : CK(4500) : AC(1574), Cyclooxygenase 2 Inhibitors : CK(448) : AC(267), Interleukin-1 beta downregulation : CK(452) : AC(199), Matrix metalloproteinase-9 (MMP-9) inhibitor : CK(197) : AC(126), Neuroprotective Agents : CK(2235) : AC(1052), Nitric Oxide Inhibitor : CK(223) : AC(108), Tumor Necrosis Factor (TNF) Alpha Inhibitor :

CK(1752) : AC(641)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Allicin (AC 1) (CK 1)

**Polyphenol antioxidants have properties to treat neurodegenerative diseases.**

**Pubmed Data** : Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type** : Review

**Additional Links**

**Substances** : Allicin : CK(48) : AC(25), Carnosic Acid : CK(21) : AC(16), Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Isothiocyanate : CK(15) : AC(4), Quercetin : CK(557) : AC(246), Resveratrol : CK(1232) : AC(737), Rosmarinic acid : CK(21) : AC(11), Sulforaphane : CK(533) : AC(262)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Alpha-Lipoic Acid (AC 10) (CK 42)

**A combination of nutrients improves cognitive functioning while decreasing Alzheimer disease neuropathology in an animal model.**

**Pubmed Data** : PLoS One. 2010;5(11):e14015. Epub 2010 Nov 17. PMID: [21103342](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Anna Parachikova, Kim N Green, Curt Hendrix, Frank M LaFerla

**Study Type** : Animal Study

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), B-complex : CK(268) : AC(31), Curcumin :

CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Piperine : CK(114) : AC(60), Vitamin C : CK(1953) : AC(401)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Alpha lipoic acid is an anti-inflammatory and neuroprotective treatment for Alzheimer's disease.

**Pubmed Data** : Adv Drug Deliv Rev. 2008 Oct-Nov;60(13-14):1463-70. Epub 2008 Jul 4. PMID: [18655815](#)

**Article Published Date** : Oct 01, 2008

**Authors** : Annette Maczurek, Klaus Hager, Marlene Kenklies, Matt Sharman, Ralph Martins, Jürgen Engel, David A Carlson, Gerald Münch

**Study Type** : Human Study

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Alpha lipoic appears to be an effective neuroprotective agent in Alzheimer's disease.

**Pubmed Data** : J Neural Transm Suppl. 2007;(72):189-93. PMID: [17982894](#)

**Article Published Date** : Jan 01, 2007

**Authors** : K Hager, M Kenklies, J McAfoose, J Engel, G Münch

**Study Type** : Human Study

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Homocysteine-lowering therapy may prevent bone loss in Parkinson's disease patients taking levodopa.

**Pubmed Data** : Mov Disord. 2010 Feb 15;25(3):332-40. PMID: [19938151](#)

**Article Published Date** : Feb 15, 2010

**Authors** : Seung Hun Lee, Mi Jung Kim, Beom-Jun Kim, Sung Reul Kim, Sail Chun, Jin Sook Ryu, Ghi Su Kim, Myoung Chong Lee, Jung-Min Koh, Sun Ju Chung

**Study Type** : Human Study

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , Vitamin B-12 : CK(770) : AC(103)

**Diseases** : Homocystinuria : CK(10) : AC(1), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions :** [Antioxidants](#) : CK(7192) : AC(2631)  
**Additional Keywords :** [Diseases that are Linked](#) : CK(2285) : AC(299)

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## Lipoic acid improves neuronal insulin signalling and rescues cognitive function.

**Pubmed Data :** Biochim Biophys Acta. 2016 Jan 6. Epub 2016 Jan 6. PMID: [26769360](#)

**Article Published Date :** Jan 05, 2016

**Authors :** Manuel Rodriguez-Perdigon, Maite Solas, Maria Jesús Moreno-Aliaga, Maria Javier Ramirez

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Alpha-Lipoic Acid](#) : CK(462) : AC(106)

**Diseases :** [Alzheimer's Disease](#) : CK(1282) : AC(375) , [High Fat Diet](#) : CK(176) : AC(85)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Lipoic acid significantly improves survival time in a transgenic mouse model of ALS

**Pubmed Data :** Exp Neurol. 2001 Apr;168(2):419-24. PMID: [11259130](#)

**Article Published Date :** Apr 01, 2001

**Authors :** O A Andreassen, A Dedeoglu, A Friedlich, K L Ferrante, D Hughes, C Szabo, M F Beal

**Study Type :** Transgenic Animal Study

**Additional Links**

**Substances :** [Alpha-Lipoic Acid](#) : CK(462) : AC(106)

**Diseases :** [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data :** Clin Nutr. 2009 Dec;28(6):604-17. Epub 2009 Sep 25. PMID: [19782443](#)

**Article Published Date :** Dec 01, 2009

**Authors :** Barkha P Patel, Mazen J Hamadeh

**Study Type :** Commentary

**Additional Links**

**Substances :** [Alpha-Lipoic Acid](#) : CK(462) : AC(106) , [Carnitine](#) : CK(434) : AC(66) , [Coenzyme Q10](#) : CK(941) : AC(140) , [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312) , [Folic Acid](#) : CK(643) : AC(93) , [Ginkgo biloba](#) : CK(796) : AC(161) , [Melatonin](#) : CK(946) : AC(304) , [Red Wine Extract](#) : CK(114) : AC(32) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases :** [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## R-lipoic acid and acetyl-L-carnitine ameliorate age-

## associated oxidative damage to the brain, in a rat experimental model.

**Pubmed Data** : Neurochem Res. 2009 Apr;34(4):755-63. Epub 2008 Oct 10. PMID: [18846423](#)

**Article Published Date** : Apr 01, 2009

**Authors** : Jiangang Long, Feng Gao, Liqi Tong, Carl W Cotman, Bruce N Ames, Jiankang Liu

**Study Type** : Animal Study

**Additional Links**

**Substances** : Acetyl-L-carnitine : CK(211) : AC(36), Alpha-Lipoic Acid : CK(462) : AC(106)

**Diseases** : Aging: Brain : CK(246) : AC(84), Alzheimer's Disease : CK(1283) : AC(376), Cognitive Decline/Dysfunction : CK(1138) : AC(212)

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## This review will provide an overview of the antioxidant, anti-inflammatory, anti-amyloidogenic, neuroprotective, and cognition-enhancing effects of a variety of nutraceuticals.

**Pubmed Data** : Neurochem Int. 2015 Oct 31. Epub 2015 Oct 31. PMID: [26529297](#)

**Article Published Date** : Oct 30, 2015

**Authors** : Madhuri Venigalla, Erika Gyengesi, Matthew J Sharman, Gerald Münch

**Study Type** : Review

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), Apigenin : CK(158) : AC(101), Curcumin : CK(4128) : AC(2171), DHA (Docosahexaenoic Acid) : CK(783) : AC(129), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Resveratrol : CK(1232) : AC(737)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

---

## Vitamin E, acetyl-L-carnitine and $\alpha$ -lipoic acid are superior to the drug donepezil (Aricept) at normalizing biomarkers associated with Alzheimer's disease in an animal model.

**Pubmed Data** : Exp Toxicol Pathol. 2010 Dec 23. Epub 2010 Dec 23. PMID: [21183322](#)

**Article Published Date** : Dec 23, 2010

**Authors** : Hanaa H Ahmed

**Study Type** : Animal Study

**Additional Links**

**Substances** : Acetyl-L-carnitine : CK(211) : AC(36), Alpha-Lipoic Acid : CK(462) : AC(106), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Additional Keywords** : Superiority of Natural Substances versus Drugs : CK(1304) : AC(249)

## Amino Acids: Branched Chain (AC 1) (CK 2)

**Branched chain amino acids may have a therapeutic role in ALS.**

**Pubmed Data** : Mol Nutr Food Res. 2011 Apr ;55(4):541-52. Epub 2011 Jan 5. PMID: [21462321](#)

**Article Published Date** : Mar 31, 2011

**Authors** : Aldina Venerosi, Alberto Martire, Angela Rungi, Massimo Pieri, Antonella Ferrante, Cristina Zona, Patrizia Popoli, Gemma Calamandrei

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Amino Acids: Branched Chain](#) : CK(12) : AC(2)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

## Amla Fruit (AC 2) (CK 4)

**Emblica officinalis (Amla) improves memory and reverses memory deficits in rats.**

**Pubmed Data** : Yakugaku Zasshi. 2007 Oct;127(10):1701-7. PMID: [17917427](#)

**Article Published Date** : Oct 01, 2007

**Authors** : Mani Vasudevan, Milind Parle

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Amla Fruit](#) : CK(80) : AC(33)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Dementia](#) : CK(571) : AC(79) , [Memory Disorders](#) : CK(340) : AC(103) , [Memory Loss](#) : CK(153) : AC(40)

**Tannoid principles of E. officinalis may be a promising therapy in ameliorating neurotoxicity of aluminum.**

**Pubmed Data** : Nutr Neurosci. 2015 Apr 4. Epub 2015 Apr 4. PMID: [25842984](#)

**Article Published Date** : Apr 03, 2015

**Authors** : Arokiasamy Justin Thenmozhi, Mathiyazahan Dhivyabharathi, Tharsius Raja William Raja, Thamilarasan Manivasagam, Musthafa Mohamed Essa

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Amla Fruit](#) : CK(80) : AC(33)

**Diseases** : [Aluminum Toxicity](#) : CK(195) : AC(75), [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

**Problem Substances** : [Aluminum Chloride](#) : CK(29) : AC(12)

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## Amurensin G (AC 1) (CK 5)

**Amurensin G induces autophagy and attenuates cellular toxicities in a rotenone model of Parkinson's disease.**

**Pubmed Data** : Biochem Biophys Res Commun. 2013 Mar 29 ;433(1):121-6. Epub 2013 Feb 26. PMID: [23485458](#)

**Article Published Date** : Mar 28, 2013

**Authors** : Hyun-Wook Ryu, Won Keun Oh, Ik-Soon Jang, Junsoo Park

**Study Type** : Human In Vitro

**Additional Links**

**Substances** : [Amurensin G](#) : CK(5) : AC(1)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Phytotherapy](#) : CK(1175) : AC(216)

**Problem Substances** : [Rotenone](#) : CK(5) : AC(1)

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## Angelica (AC 1) (CK 2)

**Angelica sinensis prevents neurotoxicity induced by Abeta-associated oxidative stress.**

**Pubmed Data** : Phytomedicine. 2008 Sep;15(9):710-21. Epub 2008 Apr 29. PMID: [18448320](#)

**Article Published Date** : Sep 01, 2008

**Authors** : Shih-Hao Huang, Chun-Mao Lin, Been-Huang Chiang

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Angelica](#) : CK(82) : AC(27)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Anthocyanins (AC 6) (CK 17)

**A mixture of anthocyanins and anthocyanidins could target multiple mechanisms involved in the etiology of AD and could be useful in preventing and treating AD.**

**Pubmed Data** : Cent Nerv Syst Agents Med Chem. 2015 Jul 30. Epub 2015 Jul 30. PMID: [26238538](#)

**Article Published Date** : Jul 29, 2015

**Authors** : Abdenour Belkacemi, Charles Ramassamy

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Anthocyanins](#) : CK(332) : AC(114)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Anthocyanidins](#) : CK(1) : AC(1), [Blood Brain Barrier](#) : CK(32) : AC(12)

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**A purple sweet potato extract rich in caffeoylquinic acids had a neuroprotective effect on mouse brain and could improve the spatial learning and memory.**

**Pubmed Data** : J Agric Food Chem. 2013 May 29 ;61(21):5037-45. Epub 2013 May 16. PMID: [23647122](#)

**Article Published Date** : May 28, 2013

**Authors** : Kazunori Sasaki, Junkyu Han, Hidetoshi Shimozone, Myra O Villareal, Hiroko Isoda

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Anthocyanins](#) : CK(332) : AC(114), [Caffeoylquinic Acids](#) : CK(1) : AC(1), [Sweet Potato](#):

Purple : CK(43) : AC(26)

**Diseases** : Learning disorders : CK(188) : AC(50) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Bilberry polyphenols divert A $\beta$ aggregation to an alternate, non-toxic form.

**Pubmed Data** : Nutr Neurosci. 2015 Aug 25. Epub 2015 Aug 25. PMID: [26304685](#)

**Article Published Date** : Aug 24, 2015

**Authors** : Miho Yoshida Yamakawa, Kazuyuki Uchino, Yasuhiro Watanabe, Tadashi Adachi, Mami Nakanishi, Hikari Ichino, Kunihiro Hongo, Tomohiro Mizobata, Saori Kobayashi, Kenji Nakashima, Yasushi Kawata

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114), Bilberry : CK(108) : AC(26)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Purple sweet potato anthocyanins may be a promising approach for the treatment of alzheimer's disease and other oxidative-stress-related neurodegenerative diseases.

**Pubmed Data** : Neurochem Res. 2010 Mar ;35(3):357-65. Epub 2009 Sep 22. PMID: [19771514](#)

**Article Published Date** : Feb 28, 2010

**Authors** : Junli Ye, Xiangjun Meng, Chunling Yan, Chunbo Wang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## These findings suggest that the intake of some flavonoids may reduce Parkinson's disease risk.

**Pubmed Data** : Neurology. 2012 Apr 10 ;78(15):1138-45. Epub 2012 Apr 4. PMID: [22491871](#)

**Article Published Date** : Apr 09, 2012

**Authors** : X Gao, A Cassidy, M A Schwarzschild, E B Rimm, A Ascherio

**Study Type** : Human Study

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114), Flavonoids : CK(1194) : AC(376)

**Diseases** : Parkinson's Disease : CK(526) : AC(164)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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**Whole-grape products are safer choices for better health and disease prevention. But for advanced disease conditions, individual grape ingredients or combinations appear to be better.**

**Pubmed Data** : Ann N Y Acad Sci. 2015 Jun 22. Epub 2015 Jun 22. PMID: [26099945](#)

**Article Published Date** : Jun 21, 2015

**Authors** : Chandra K Singh, Xiaoqi Liu, Nihal Ahmad

**Study Type** : Commentary

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114), Catechin : CK(512) : AC(169), Flavonoids : CK(1194) : AC(376), Grapes : CK(26) : AC(7), Polyphenols : CK(920) : AC(333), Resveratrol : CK(1232) : AC(737)

**Diseases** : Cancers: All : CK(14297) : AC(4542), Neurodegenerative Diseases : CK(3370) : AC(846)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Natural Substance Synergy : CK(534) : AC(244)

---

## Antioxidant formulas (AC 4) (CK 14)

**Defined cocktails of dietary factors at low concentrations might be a suitable strategy to reduce oxidative damage in neurodegenerative diseases.**

**Pubmed Data** : Oxid Med Cell Longev. 2015;2015:217258. Epub 2015 Jul 8. PMID: [26236423](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Flavio Amara, Miluscia Berbenni, Martina Fragni, Giampaolo Leoni, Sandra Viggiani, Vita Maria Ippolito, Marilena Larocca, Rocco Rossano, Lilia Alberghina, Paolo Riccio, Anna Maria Colangelo

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Antioxidant formulas : CK(492) : AC(76), Carotenoids : CK(1620) : AC(306), Polyphenols : CK(920) : AC(333)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Dietary Concentrations : CK(85) : AC(22) , Natural Substance Synergy : CK(534) : AC(244), Plant Extracts : CK(7288) : AC(2419)

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## Effects of natural antioxidants in neurodegenerative disease.

**Pubmed Data** : Nutr Neurosci. 2012 Jan ;15(1):1-9. PMID: [22305647](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Sonia Luz Albarracin, Ben Stab, Zulma Casas, Jhon Jairo Sutachan, Ismael Samudio, Janneth Gonzalez, Luis Gonzalo, Francisco Capani, Ludis Morales, George E Barreto

**Study Type** : Review

### Additional Links

**Substances** : Antioxidant formulas : CK(492) : AC(76), Polyphenols : CK(920) : AC(333)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

---

## Selenium, glutathione, copper/zinc and superoxide dismutase may have therapeutic value in ALS.

**Pubmed Data** : Scand J Rheumatol. 1995;24(2):85-93. PMID: [9726810](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Apostolski, Z Marinković, A Nikolić, D Blagojević, M B Spasić, A M Michelson

**Study Type** : Human Study

### Additional Links

**Substances** : Antioxidant formulas : CK(492) : AC(76), Copper : CK(83) : AC(17), Glutathione : CK(61) : AC(16), Selenium : CK(784) : AC(139), Superoxide dismutase : CK(16) : AC(5), Zinc : CK(941) : AC(139)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Calcium Channel Blockers : CK(87) : AC(23)

---

## The progression of ALS is associated with oxygen radical-induced lipid peroxidative damage, indicating that antioxidant therapy may be useful.

**Pubmed Data** : J Neurosci Res. 1998 Jul 1;53(1):66-77. PMID: [9670993](#)

**Article Published Date** : Jul 01, 1998

**Authors** : E D Hall, P K Andrus, J A Oostveen, T J Fleck, M E Gurney

**Study Type** : Animal Study

### Additional Links

**Substances** : Antioxidant formulas : CK(492) : AC(76), Vitamin E : CK(1656) : AC(290)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Lipid Peroxidation : CK(692) : AC(252),

Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630)

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## Antrodia camphorata (AC 1) (CK 2)

**Antroquinonol could have beneficial effects on Alzheimer's disease like deficits in APP transgenic mouse.**

**Pubmed Data** : Sci Rep. 2015 ;5:15067. Epub 2015 Oct 15. PMID: [26469245](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Wen-Han Chang, Miles C Chen, Irene H Cheng

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Antrodia camphorata : CK(7) : AC(4)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052), NF-E2-Related Factor-2 (Nrf2) Modulator : CK(45) : AC(24)

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## Apigenin (AC 4) (CK 5)

**Apigenin and luteolin have anti-inflammatory effects and may have neuroprotective/disease-modifying properties in various neurodegenerative disorders, including Alzheimer's disease (AD).**

**Pubmed Data** : J Neuroinflammation. 2008;5:41. Epub 2008 Sep 25. PMID: [18817573](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Kavon Rezai-Zadeh, Jared Ehrhart, Yun Bai, Paul R Sanberg, Paula Bickford, Jun Tan, R Douglas Shytle

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Apigenin : CK(158) : AC(101), Luteolin : CK(104) : AC(78)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain: Microglial Activation : CK(82) : AC(53),

Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Immunomodulatory : CK(1284) : AC(355), Interferon Inducers : CK(31) : AC(9), Neuroprotective Agents : CK(2235) : AC(1052), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

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## Apigenin stimulates neurogenesis in adult rats.

**Pubmed Data** : Expert Opin Ther Pat. 2009 Apr;19(4):523-7. PMID: [19441930](#)

**Article Published Date** : Apr 01, 2009

**Authors** : Philippe Taupin

**Study Type** : Animal Study

**Additional Links**

**Substances** : Apigenin : CK(158) : AC(101)

**Diseases** : Neurodegenerative Diseases : CK(3376) : AC(850), Neurologic Disorders : CK(65) : AC(29)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59)

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## Curcumin and Apigenin might delay the onset of Alzheimer's disease or slow down its progression.

**Pubmed Data** : Neural Regen Res. 2015 Aug ;10(8):1181-5. PMID: [26487830](#)

**Article Published Date** : Jul 31, 2015

**Authors** : Madhuri Venigalla, Erika Gyengesi, Gerald Münch

**Study Type** : Review

**Additional Links**

**Substances** : Apigenin : CK(158) : AC(101), Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Neuroprotective Agents : CK(2235) : AC(1052)

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## This review will provide an overview of the antioxidant, anti-inflammatory, anti-amyloidogenic, neuroprotective, and cognition-enhancing effects of a variety of nutraceuticals.

**Pubmed Data** : Neurochem Int. 2015 Oct 31. Epub 2015 Oct 31. PMID: [26529297](#)

**Article Published Date** : Oct 30, 2015

**Authors** : Madhuri Venigalla, Erika Gyengesi, Matthew J Sharman, Gerald Münch

**Study Type** : Review

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), Apigenin : CK(158) : AC(101), Curcumin : CK(4128) : AC(2171), DHA (Docosahexaenoic Acid) : CK(783) : AC(129), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Resveratrol : CK(1232) : AC(737)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140),

## Apples (AC 3) (CK 14)

**Antioxidant beverages could be used as a natural complementary therapy to alleviate or decrease oxidative stress in Alzheimer's disease.**

**Pubmed Data** : Eur J Nutr. 2015 Aug 23. Epub 2015 Aug 23. PMID: [26298312](#)

**Article Published Date** : Aug 22, 2015

**Authors** : Jose M Rubio-Perez, Maria D Albaladejo, Pilar Zafrilla, Maria L Vidal-Guevara, Juana M Morillas-Ruiz

**Study Type** : Human Study

**Additional Links**

**Substances** : Apples : CK(373) : AC(99), Green Tea : CK(1934) : AC(549)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630)

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**Dietary supplementation with apple juice decreases endogenous amyloid-beta levels in mouse brain.**

**Pubmed Data** : Int J Mol Med. 2010 Oct;26(4):447-55. PMID: [19158432](#)

**Article Published Date** : Oct 01, 2010

**Authors** : Amy Chan, Thomas B Shea

**Study Type** : Animal Study

**Additional Links**

**Substances** : Apples : CK(373) : AC(99)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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**The consumption of apples can prevent the decline in cognitive performance that accompanies dietary and genetic deficiencies and aging.**

**Pubmed Data** : J Alzheimers Dis. 2006 Aug;9(3):287-91. PMID: [16914839](#)

**Article Published Date** : Aug 01, 2006

**Authors** : [No authors listed]

**Study Type** : Animal Study

**Additional Links**

**Substances** : Apples : CK(373) : AC(99)

**Diseases** : Aging: Brain : CK(246) : AC(84), Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631)

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## Arctigenin (AC 1) (CK 2)

**Arctigenin effectively provides protection against learning and memory deficits.**

**Pubmed Data** : Planta Med. 2016 May 25. Epub 2016 May 25. PMID: [27224270](#)

**Article Published Date** : May 24, 2016

**Authors** : Yue Qi, De-Qiang Dou, Hong Jiang, Bing-Bing Zhang, Wen-Yan Qin, Kai Kang, Na Zhang, Dong Jia

**Study Type** : Animal Study

**Additional Links**

**Substances** : Arctigenin : CK(14) : AC(9)

**Diseases** : Learning disorders : CK(188) : AC(50), Memory Disorders : CK(340) : AC(103), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Arginine (AC 2) (CK 3)

**L-arginine has potent in vitro and in vivo neuroprotective properties and may be a candidate for therapeutic trials in ALS.**

**Pubmed Data** : Biochem Biophys Res Commun. 2009 Jul 10;384(4):524-9. Epub 2009 May 8. PMID: [19427829](#)

**Article Published Date** : Jul 10, 2009

**Authors** : Junghee Lee, Hoon Ryu, Neil W Kowall

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Arginine](#) : CK(999) : AC(173)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053) , [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

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## L-arginine may have a therapeutic role in Alzheimer's disease.

**Pubmed Data** : Int J Clin Exp Pathol. 2009;2(3):211-38. Epub 2008 Oct 2. PMID: [19079617](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Jing Yi, Laura L Horky, Avi L Friedlich, Ying Shi, Jack T Rogers, Xudong Huang

**Study Type** : Review

**Additional Links**

**Substances** : [Arginine](#) : CK(999) : AC(173)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## Ashwagandha (AC 5) (CK 8)

### Ashwaganda attenuates 6-hydroxydopamine induced Parkinsonism in rats.

**Pubmed Data** : Hum Exp Toxicol. 2005 Mar;24(3):137-47. PMID: [15901053](#)

**Article Published Date** : Mar 01, 2005

**Authors** : Muzamil Ahmad, Sofiyan Saleem, Abdullah Shafique Ahmad, Mubeen Ahmad Ansari, Seema Yousuf, Md Nasrul Hoda, Fakhrul Islam

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ashwagandha](#) : CK(135) : AC(67)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

---

### Ashwaganda contains compounds which may ameliorate neuronal dysfunction in Alzheimer's disease.

**Pubmed Data** : Eur J Neurosci. 2006 Mar;23(6):1417-26. PMID: [16553605](#)

**Article Published Date** : Mar 01, 2006

**Authors :** Tomoharu Kuboyama, Chihiro Tohda, Katsuko Komatsu

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Ashwagandha](#) : CK(135) : AC(67)

**Diseases :** [Alzheimer's Disease](#) : CK(1283) : AC(376)

---

## Ashwaganda contains compounds which promote the formation of dendrites, indicating its therapeutic potential in the dementia brain.

**Pubmed Data :** Neuroreport. 2000 Jun 26;11(9):1981-5. PMID: [10884056](#)

**Article Published Date :** Jun 26, 2000

**Authors :** C Tohda, T Kuboyama, K Komatsu

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Ashwagandha](#) : CK(136) : AC(68)

**Diseases :** [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions :** [Neurorestorative](#) : CK(71) : AC(21)

---

## Ashwaganda contains compounds with significant neurologically regenerative properties, capable of reconstructing neuronal networks.

**Pubmed Data :** Br J Pharmacol. 2005 Apr;144(7):961-71. PMID: [15711595](#)

**Article Published Date :** Apr 01, 2005

**Authors :** Tomoharu Kuboyama, Chihiro Tohda, Katsuko Komatsu

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Ashwagandha](#) : CK(136) : AC(68)

**Diseases :** [Memory Disorders](#) : CK(340) : AC(103), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Neuritogenic](#) : CK(133) : AC(59)

---

## Ashwaganda reverses some aspects of Alzheimer's disease pathology.

**Pubmed Data :** Proc Natl Acad Sci U S A. 2012 Jan 30. Epub 2012 Jan 30. PMID: [22308347](#)

**Article Published Date :** Jan 30, 2012

**Authors :** Neha Sehgal, Alok Gupta, Rupanagudi Khader Valli, Shanker Datt Joshi, Jessica T Mills, Edith Hamel, Pankaj Khanna, Subhash Chand Jain, Suman S Thakur, Vijayalakshmi Ravindranath

**Study Type :** Transgenic Animal Study

**Additional Links**

**Substances :** [Ashwagandha](#) : CK(135) : AC(67)

## Astaxanthin (AC 7) (CK 7)

### Astaxanthin exhibits neuroprotective properties.

**Pubmed Data :** Food Chem Toxicol. 2011 Jan;49(1):271-80. Epub 2010 Nov 5. PMID: [21056612](#)

**Article Published Date :** Jan 01, 2011

**Authors :** Dae-Hee Lee, Cuk-Seong Kim, Yong J Lee

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Astaxanthin : CK\(406\) : AC\(146\)](#)

**Diseases :** [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#), [Oxidative Stress : CK\(3800\) : AC\(1357\)](#), [Parkinson's Disease : CK\(525\) : AC\(163\)](#)

**Pharmacological Actions :** [Antioxidants : CK\(7191\) : AC\(2630\)](#), [Catalase Up-Regulation : CK\(118\) : AC\(42\)](#), [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#), [Superoxide Dismutase Up-regulation : CK\(504\) : AC\(169\)](#)

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### Astaxanthin has a protective effect against 6-hydroxydopamine-induced neurotoxicity.

**Pubmed Data :** J Neurochem. 2008 Dec;107(6):1730-40. Epub 2008 Nov 7. PMID: [19014378](#)

**Article Published Date :** Dec 01, 2008

**Authors :** Yasutaka Ikeda, Shinji Tsuji, Akira Satoh, Masaharu Ishikura, Takuji Shirasawa, Takahiko Shimizu

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Astaxanthin : CK\(406\) : AC\(146\)](#)

**Diseases :** [Dopamine Toxicity : CK\(3\) : AC\(2\)](#), [Parkinson's Disease : CK\(525\) : AC\(163\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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### Astaxanthin may be an ideal neuroprotective adjuvant agent in Alzheimer's disease.

**Pubmed Data :** J Med Food. 2010 Jun;13(3):548-56. PMID: [20521980](#)

**Article Published Date :** Jun 01, 2010

**Authors :** Chi-Huang Chang, Chung-Yin Chen, Jueen-Ya Chiou, Robert Y Peng, Chiung-Huei Peng

**Study Type :** In Vitro Study

### Additional Links

**Substances** : [Astaxanthin](#) : CK(406) : AC(146)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062), [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Astaxanthin may be effective against oxidative stress-associated neurodegeneration.

**Pubmed Data** : Brain Res. 2009 Feb 13;1254:18-27. Epub 2008 Dec 3. PMID: [19101523](#)

**Article Published Date** : Feb 13, 2009

**Authors** : Xuebo Liu, Takahiro Shibata, Shinsuke Hisaka, Toshihiko Osawa

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Astaxanthin](#) : CK(406) : AC(146)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Astaxanthin protects against beta-amyloid-induced oxidative stress in neuronal cells.

**Pubmed Data** : Brain Res. 2010 Nov 11;1360:159-67. Epub 2010 Sep 7. PMID: [20828541](#)

**Article Published Date** : Nov 11, 2010

**Authors** : Hong-Quan Wang, Xiao-Bo Sun, Yu-Xia Xu, Hong Zhao, Qin-Yuan Zhu, Cui-Qing Zhu

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Astaxanthin](#) : CK(406) : AC(146)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

---

## Astaxanthin protects neuronal cells against oxidative damage.

**Pubmed Data** : Forum Nutr. 2009;61:129-35. Epub 2009 Apr 7. PMID: [19367117](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Xuebo Liu, Toshihiko Osawa

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Astaxanthin](#) : CK(406) : AC(146)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

## Consumption of astaxanthin may be a beneficial strategy in human health management of AD and possibly of other neurological disorders as well.

**Pubmed Data** : Neural Plast. 2016 ;2016:3456783. Epub 2016 Mar 1. PMID: [27034843](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Pedro Lobos, Barbara Bruna, Alex Cordova, Pablo Barattini, Jose Luis Galáz, Tatiana Adasme, Cecilia Hidalgo, Pablo Muñoz, Andrea Paula-Lima

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Astaxanthin](#) : CK(406) : AC(146)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Gene Expression Regulation](#) : CK(422) : AC(209)

## Ayurvedic Formulation: Chyawanprash (AC 1) (CK 2)

### The ayurvedic formulation chyawanprash has anti-amnesic activity in mice.

**Pubmed Data** : Evid Based Complement Alternat Med. 2011 ;2011:898593. Epub 2011 Jun 5. PMID: [21789046](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Milind Parle, Nitin Bansal

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ayurvedic Formulation: Chyawanprash](#) : CK(2) : AC(1)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Amnesia](#) : CK(10) : AC(5), [Memory Loss](#) : CK(153) : AC(40)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Cholinergic Agents](#) : CK(3) : AC(2)

## B-complex (AC 5) (CK 33)

### A combination of nutrients improves cognitive functioning while decreasing Alzheimer disease neuropathology in an animal model.

**Pubmed Data** : PLoS One. 2010;5(11):e14015. Epub 2010 Nov 17. PMID: [21103342](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Anna Parachikova, Kim N Green, Curt Hendrix, Frank M LaFerla

**Study Type** : Animal Study

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , B-complex : CK(268) : AC(31) , Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Piperine : CK(114) : AC(60), Vitamin C : CK(1953) : AC(401)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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### B vitamin deficiency promotes pathological markers for Alzheimer's disease.

**Pubmed Data** : J Alzheimers Dis. 2010 Jan 1;19(3):895-907. PMID: [20157245](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Vincenzina Nicolai, Andrea Fuso, Rosaria A Cavallaro, Andrea Di Luzio, Sigfrido Scarpa

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : B-complex : CK(268) : AC(31)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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### High homocysteine levels may be associated with the pathogenesis of neurological disorders.

**Pubmed Data** : Front Biosci (Schol Ed). 2010;2:359-72. Epub 2010 Jan 1. PMID: [20036953](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Riccardo Ientile, Monica Curro', Nadia Ferlazzo, Salvatore Condello, Daniela Caccamo, Francesco Pisani

**Study Type** : Human Study

**Additional Links**

**Substances** : B-complex : CK(268) : AC(31)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Epilepsy : CK(248) : AC(62) , High Homocysteine : CK(431) : AC(63) , Hyperhomocysteinemia : CK(431) : AC(63), Multiple Sclerosis : CK(953) : AC(182) , Parkinson's Disease : CK(525) : AC(163) , Stroke : CK(1322) : AC(163)  
**Additional Keywords** : Diseases that are Linked : CK(2285) : AC(299)

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## Higher levels of homocysteine and lower levels of folate and B vitamins are found in people with Alzheimer's disease.

**Pubmed Data** : Neurobiol Aging. 2015 Jan ;36 Suppl 1:S203-10. Epub 2014 Aug 30. PMID: [25444607](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Sarah K Madsen, Priya Rajagopalan, Shantanu H Joshi, Arthur W Toga, Paul M Thompson,

**Study Type** : Human Study

**Additional Links**

**Substances** : B-complex : CK(268) : AC(31)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Alzheimer's Disease: Homocysteine Associated : CK(14) : AC(3)

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## L-dopa causes high homocysteine levels which may be prevented with B-vitamin supplementation.

**Pubmed Data** : Biometals. 2008 Sep 4. [Epub ahead of print] PMID: [14994447](#)

**Article Published Date** : Sep 04, 2008

**Authors** : Katharina Schroecksnadel, Friedrich Leblhuber, Dietmar Fuchs

**Study Type** : Human Study

**Additional Links**

**Substances** : B-complex : CK(268) : AC(31)

**Diseases** : High Homocysteine : CK(431) : AC(63) , Parkinson's Disease : CK(526) : AC(164)

**Additional Keywords** : Diseases that are Linked : CK(2285) : AC(299)

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## Bacopa (AC 11) (CK 20)

**Bacopa enhances cognitive function and protects against neurodegeneration in an Alzheimer's disease model.**

**Pubmed Data** : J Ethnopharmacol. 2009 Oct 4. Epub 2009 Oct 4. PMID: [19808086](#)

**Article Published Date** : Oct 04, 2009

**Authors** : Nongnut Uabundit, Jintanaporn Wattanathorn, Supaporn Mucimapura, Kornkanok Ingkaninan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bacopa : CK(125) : AC(52)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3370) : AC(846)

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## Bacopa extract reduces brain amyloid levels in mice by as much as 60%.

**Pubmed Data** : J Alzheimers Dis. 2006 Aug;9(3):243-51. PMID: [16914834](#)

**Article Published Date** : Aug 01, 2006

**Authors** : Leigh A Holcomb, Muralikrishnan Dhanasekaran, Angie R Hitt, Keith A Young, Mark Riggs, Bala V Manyam

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bacopa : CK(125) : AC(52)

**Diseases** : Aging: Brain : CK(246) : AC(84), Alzheimer's Disease : CK(1282) : AC(375) , Amyloidosis : CK(23) : AC(8)

**Pharmacological Actions** : Neurorestorative : CK(71) : AC(21)

**Additional Keywords** : Plant Extracts : CK(7290) : AC(2420)

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## Bacopa has a neuroprotective effect against rotenone-induced oxidative stress and neurotoxicity.

**Pubmed Data** : Neurotoxicology. 2009 Nov;30(6):977-85. Epub 2009 Sep 8. PMID: [19744517](#)

**Article Published Date** : Nov 01, 2009

**Authors** : Ravikumar Hosamani, Muralidhara

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bacopa : CK(125) : AC(52)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357) , Pesticide Toxicity : CK(188) : AC(59)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Bacopa monniera extracts administered orally produce neuroprotective effect in cold stress induced hippocampal neurodegeneration of rats.

**Pubmed Data** : J Clin Diagn Res. 2015 Jan ;9(1):AF05-7. Epub 2015 Jan 1. PMID: [25737970](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Saravana S Kumar, P Saraswathi, R Vijayaraghavan

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bacopa](#) : CK(125) : AC(52)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Bacopa monniera may have therapeutic value for the treatment of cognitive impairment.

**Pubmed Data** : Metab Brain Dis. 2015 Feb ;30(1):115-27. Epub 2014 Jul 19. PMID: [25037167](#)

**Article Published Date** : Jan 31, 2015

**Authors** : M Badruzzaman Khan, Muzamil Ahmad, Saif Ahmad, Tauheed Ishrat, Kumar Vaibhav, Gulrana Khuwaja, Fakhrul Islam

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bacopa](#) : CK(125) : AC(52)

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Lipid Peroxidation](#) : CK(692) : AC(252), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

**Additional Keywords** : [Phytotherapy](#) : CK(1175) : AC(216), [Plant Extracts](#) : CK(7288) : AC(2419)

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## Bacopa monnieri extracts have memory enhancing and anti-diabetic properties.

**Pubmed Data** : PLoS One. 2015 ;10(7):e0131862. Epub 2015 Jul 10. PMID: [26161865](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Surya P Pandey, Hemant K Singh, S Prasad

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bacopa](#) : CK(125) : AC(52)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Diabetes Mellitus: Type 2](#) : CK(3344) : AC(592), [Memory Loss](#) : CK(153) : AC(40)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Gene Expression Regulation](#) : CK(422) : AC(209)

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## Bacopa monnieri has therapeutic potential in the treatment of Alzheimer disease associated cognitive

## decline.

**Pubmed Data** : Neurochem Res. 2012 Sep ;37(9):1928-37. Epub 2012 Jun 15. PMID: [22700087](#)

**Article Published Date** : Aug 31, 2012

**Authors** : Neetu Saini, Devinder Singh, Rajat Sandhir

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bacopa : CK(125) : AC(52)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Bacopa monnieri is a potential therapeutic antioxidant to reduce oxidative stress and improve cognitive function.

**Pubmed Data** : Evid Based Complement Alternat Med. 2015 ;2015:615384. Epub 2015 Aug 27. PMID: [26413126](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Tamara Simpson, Matthew Pase, Con Stough

**Study Type** : Review

**Additional Links**

**Substances** : Bacopa : CK(125) : AC(52)

**Diseases** : Aging: Brain : CK(246) : AC(84), Alzheimer's Disease : CK(1282) : AC(375), Brain: Oxidative Stress : CK(75) : AC(44), Mitochondrial Dysfunction : CK(224) : AC(90), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Bacopaside I can reduce the beta amyloid levels in the brains of mice in an Alzheimer's disease model.

**Pubmed Data** : Aging (Albany NY). 2016 Mar 2. Epub 2016 Mar 2. PMID: [26946062](#)

**Article Published Date** : Mar 01, 2016

**Authors** : Yuanyuan Li, Xing Yuan, Yunheng Shen, Jing Zhao, Rongcai Yue, Fang Liu, Weiwei He, Rui Wang, Lei Shan, Weidong Zhang

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bacopa : CK(125) : AC(52)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Brahmi exerts distinct age-related effects on the cell-mediated immune responses through selective modulation of antioxidant enzyme activities.

**Pubmed Data** : Int Immunopharmacol. 2013 Feb ;15(2):260-74. Epub 2012 Dec 17. PMID: [23257614](#)

**Article Published Date** : Jan 31, 2013

**Authors** : Hannah P Priyanka, Ran Vijay Singh, Miti Mishra, Srinivasan ThyagaRajan

**Study Type** : Animal Study, In Vitro Study

### Additional Links

**Substances** : Bacopa : CK(125) : AC(52)

**Diseases** : Aging: Brain : CK(246) : AC(84), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Catalase Up-Regulation : CK(118) : AC(42), Neuroprotective Agents : CK(2235) : AC(1052)

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## This review discusses the chemical constituents of Brahmi along with in vitro and in vivo studies based on its pharmacological effects.

**Pubmed Data** : Front Pharmacol. 2016 ;7:44. Epub 2016 Mar 4. PMID: [26973531](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Deepali Mathur, Kritika Goyal, Veena Koul, Akshay Anand

**Study Type** : Review

### Additional Links

**Substances** : Bacopa : CK(125) : AC(52)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Depression : CK(1818) : AC(262), Parkinson's Disease : CK(525) : AC(163), Schizophrenia : CK(434) : AC(68), Stroke : CK(1322) : AC(163)

**Pharmacological Actions** : Anti-Anxiety Agents : CK(334) : AC(56), Anti-Inflammatory Agents : CK(4500) : AC(1574), Anticonvulsants : CK(235) : AC(65), Antidepressive Agents : CK(986) : AC(157), Antioxidants : CK(7191) : AC(2630), Cytoprotective : CK(176) : AC(87), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## Baicalein (AC 1) (CK 1)

**Baicalein and daidzein had a synergistic effect estrogenic and neuroprotective activities in alzheimer's disease and**

## enhanced the effects of different flavonoids.

**Pubmed Data** : Evid Based Complement Alternat Med. 2013 ;2013:635694. Epub 2013 Aug 24. PMID: [24058373](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Roy C Y Choi, Judy T T Zhu, Amanda W Y Yung, Pinky S C Lee, Sherry L Xu, Ava J Y Guo, Kevin Y Zhu, Tina T X Dong, Karl W K Tsim

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Baicalein : CK(57) : AC(41), Daidzein : CK(111) : AC(32), Flavonoids : CK(1194) : AC(376)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Alzheimer's Disease : CK(1282) : AC(375), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Estrogen Receptor Agonist : CK(2) : AC(2), Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Bioenhancer : CK(8) : AC(5), Natural Substance Synergy : CK(534) : AC(244)

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## Bamboo (AC 5) (CK 8)

### Bamboo extract improved the learning and memory ability of rats.

**Pubmed Data** : J Zhejiang Univ Sci B. 2015 Jul ;16(7):593-601. PMID: [26160717](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Jian-xiang Liu, Min-ying Zhu, Ci-yuan Feng, Hai-bin Ding, Ying Zhan, Zhan Zhao, Yue-min Ding

**Study Type** : Animal Study

### Additional Links

**Substances** : Bamboo : CK(65) : AC(32)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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### Bamboo extract inhibits neuronal secretion of Alzheimer's beta-amyloid peptides.

**Pubmed Data** : Neurochem Res. 2003 Dec;28(12):1785-92. PMID: [14649718](#)

**Article Published Date** : Dec 01, 2003

**Authors** : Ji-Cheon Jeong, Sung-Koo Kang, Cheol-Ho Yoon, Young-Joon Seo, Cher-Won Hwang, Jeong-Heon Ko, Young-Choon Lee, Young-Chae Chang, Cheorl-Ho Kim

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bamboo](#) : CK(65) : AC(32)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Bamboo extract protects against amyloid beta and oxidative stress induced cell toxicity.

**Pubmed Data** : Indian J Exp Biol. 2006 Sep;44(9):705-18. PMID: [15814257](#)

**Article Published Date** : Sep 01, 2006

**Authors** : Ji-Cheon Jeong, Cheol-Ho Yoon, Woo-Hun Lee, Kwan-Kyu Park, Young-Chae Chang, Yung Hyun Choi, Cheorl-Ho Kim

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Bamboo](#) : CK(65) : AC(32)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Lig-8, a bioactive lignophenol derivative from bamboo lignin, protects against neuronal damage in vitro and in vivo.

**Pubmed Data** : J Pharmacol Sci. 2006 Oct;102(2):196-204. Epub 2006 Oct 7. PMID: [17031070](#)

**Article Published Date** : Oct 01, 2006

**Authors** : Yasushi Ito, Masamitsu Shimazawa, Yukihiro Akao, Yoshimi Nakajima, Norio Seki, Yoshinori Nozawa, Hideaki Hara

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bamboo](#) : CK(65) : AC(32) , [Lignans](#) : CK(169) : AC(46)

**Diseases** : [Brain Damage](#) : CK(93) : AC(44) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062) , [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Proteasome Inhibitors](#) : CK(51) : AC(33)

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## Lig-8, a compound extracted from bamboo, exhibits neuroprotective properties.

**Pubmed Data** : CNS Drug Rev. 2007 Fall;13(3):296-307. PMID: [17894646](#)

**Article Published Date** : Sep 01, 2007

**Authors** : Yasushi Ito, Yukihiro Akao, Masamitsu Shimazawa, Norio Seki, Yoshinori Nozawa, Hideaki Hara

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Bamboo](#) : CK(65) : AC(32)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Barberry (AC 1) (CK 2)

**Administration of Berberis vulgaris could ameliorate neurotoxicity induced by beta amyloid.**

**Pubmed Data** : Eur J Pharmacol. 2015 Jul 5 ;758:82-8. Epub 2015 Apr 8. PMID: [25861937](#)

**Article Published Date** : Jul 04, 2015

**Authors** : Masoud Haghani, Mohammad Shabani, Mahdi Tondar

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Barberry](#) : CK(22) : AC(4), [Berberine](#) : CK(299) : AC(156)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Bay leaf (AC 1) (CK 2)

**Bay leaf prevents dopamine-induced neurotoxicity.**

**Pubmed Data** : Arch Pharm Res. 2010 Dec;33(12):1953-8. Epub 2010 Dec 30. PMID: [21191760](#)

**Article Published Date** : Dec 01, 2010

**Authors** : Ahrom Ham, Bora Kim, Uk Koo, Kung-Woo Nam, Sung-Jin Lee, Kyeong Ho Kim, Jongheon Shin, Woongchon Mar

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bay leaf](#) : CK(56) : AC(28)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Dopamine Toxicity](#) : CK(3) : AC(2),

## Bee Venom (AC 9) (CK 23)

### Bee venom attenuates neuroinflammatory events and extends survival in amyotrophic lateral sclerosis models.

**Pubmed Data** : J Neuroinflammation. 2010 ;7:69. Epub 2010 Oct 15. PMID: [20950451](#)

**Article Published Date** : Dec 31, 2009

**Authors** : Eun Jin Yang, Jing Hua Jiang, Sang Min Lee, Sun Choel Yang, Hye Suk Hwang, Myeong Soo Lee, Sun-Mi Choi

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bee Venom : CK(72) : AC(35)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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### Bee venom can be used as a treatment of amyloidogenesis and neuroinflammation disease such as AD and disease by NF-κB activation.

**Pubmed Data** : J Neuroinflammation. 2015 ;12:124. Epub 2015 Jun 26. PMID: [26112466](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Sun Mi Gu, Mi Hee Park, Chul Ju Hwang, Ho Sueb Song, Ung Soo Lee, Sang Bae Han, Ki Wan Oh, Young Wan Ham, Min Jong Song, Dong Ju Son, Jin Tae Hong

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Bee Venom : CK(72) : AC(35)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140), Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , NF-kappaB Inhibitor : CK(1100) : AC(686)

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### Bee venom could be considered a potential therapeutic or preventive agent for PD and other neuroinflammatory associated disorders.

**Pubmed Data** : Arch Pharm Res. 2016 Jul 28. Epub 2016 Jul 28. PMID: [27469335](#)

**Article Published Date** : Jul 27, 2016

**Authors** : Mi Eun Kim, Joo Yeon Lee, Kyung Moon Lee, Hee Ra Park, Eunjin Lee, Yujeong Lee, Jun Sik Lee, Jaewon Lee

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bee Venom : CK(72) : AC(35)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140),  
Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Bee venom may have therapeutic value in ALS.

**Pubmed Data** : Evid Based Complement Alternat Med. 2012 ;2012:368196. Epub 2011 Aug 28. PMID: [21904562](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Sang Min Lee, Eun Jin Yang, Sun-Mi Choi, Seon Hwy Kim, Myung Gi Baek, Jing Hua Jiang

**Study Type** : Review

**Additional Links**

**Substances** : Bee Venom : CK(72) : AC(35)

**Diseases** : Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140) , Neurodegenerative Diseases : CK(3376) : AC(850)

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## Bee venom phospholipase A2 protects dopaminergic neurons by modulating neuro-inflammatory responses in a mouse model of Parkinson's disease.

**Pubmed Data** : J Immunol. 2015 Nov 15 ;195(10):4853-60. Epub 2015 Oct 9. PMID: [26453752](#)

**Article Published Date** : Nov 14, 2015

**Authors** : Eun Sook Chung, Gihyun Lee, Chanju Lee, Minsook Ye, Hwan-Suck Chung, Hyunseong Kim, Sung-Joo S Bae, Deok-Sang Hwang, Hyunsu Bae

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bee Venom : CK(72) : AC(35)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Combined treatment with acupuncture and bee venom acupuncture showed promising results as a safe adjunctive therapy for PD.

**Pubmed Data** : J Altern Complement Med. 2015 Oct ;21(10):598-603. Epub 2015 Jul 31. PMID: [26230989](#)

**Article Published Date** : Sep 30, 2015

**Authors** : Kyeong-Hee Doo, Ji-Hyun Lee, Seung-Yeon Cho, Woo-Sang Jung, Sang-Kwan Moon, Jung-Mi Park, Chang-Nam Ko, Ho Kim, Hi-Joon Park, Seong-Uk Park

**Study Type** : Human Study

**Additional Links**

**Substances** : [Bee Venom](#) : CK(72) : AC(35)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Therapeutic Actions** : [Acupuncture](#) : CK(1939) : AC(222)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

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**This reviews the scientific evidence and therapeutic effects of bee venom and its components on several immunological and neurological diseases.**

**Pubmed Data** : Toxins (Basel). 2015 Jul ;7(7):2413-21. Epub 2015 Jun 29. PMID: [26131770](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Deok-Sang Hwang, Sun Kwang Kim, Hyunsu Bae

**Study Type** : Review

**Additional Links**

**Substances** : [Bee Venom](#) : CK(72) : AC(35)

**Diseases** : [Autoimmune Diseases](#) : CK(6585) : AC(1114), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Immunomodulatory](#) : CK(1284) : AC(355)

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**This study provides experimental evidence for a symptomatic anti-Parkinson's potential of bee venom.**

**Pubmed Data** : PLoS One. 2015 ;10(11):e0142838. Epub 2015 Nov 16. PMID: [26571268](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Nicolas Maurice, Thierry Deltheil, Christophe Melon, Bertrand Degos, Christiane Mourre, Marianne Amalric, Lydia Kerkerian-Le Goff

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bee Venom](#) : CK(72) : AC(35)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**Treatment with bee venom phospholipase A2 attenuated learning and memory deficits exerted anti-neuroinflammation effects in 3xTg-AD mice.**

**Pubmed Data** : J Neuroinflammation. 2016 ;13(1):10. Epub 2016 Jan 16. PMID: [26772975](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Minsook Ye, Hwan-Suck Chung, Chanju Lee, Moon Sik Yoon, A Ram Yu, Jin Su Kim, Deok-Sang Hwang, Insop Shim, Hyunsu Bae

**Study Type** : Animal Study

**Additional Links**

**Substances** : Bee Venom : CK(72) : AC(35)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Neuroprotective Agents : CK(2235) : AC(1052)

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## Beet (AC 1) (CK 2)

**B. vulgaris significantly reduced the symptoms of parkinson's disease in animals.**

**Pubmed Data** : Indian J Pharmacol. 2015 Jul-Aug;47(4):403-8. PMID: [26288473](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Vandana S Nade, Laxman A Kawale, Shankar S Zambre, Amit B Kapure

**Study Type** : Animal Study

**Additional Links**

**Substances** : Beet : CK(103) : AC(26)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Berberine (AC 1) (CK 2)

**Administration of Berberis vulgaris could ameliorate neurotoxicity induced by beta amyloid.**

**Pubmed Data** : Eur J Pharmacol. 2015 Jul 5 ;758:82-8. Epub 2015 Apr 8. PMID: [25861937](#)

**Article Published Date** : Jul 04, 2015

**Authors** : Masoud Haghani, Mohammad Shabani, Mahdi Tondar

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Barberry](#) : CK(22) : AC(4), [Berberine](#) : CK(299) : AC(156)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Bilberry (AC 1) (CK 2)

**Bilberry polyphenols divert A $\beta$  aggregation to an alternate, non-toxic form.**

**Pubmed Data** : Nutr Neurosci. 2015 Aug 25. Epub 2015 Aug 25. PMID: [26304685](#)

**Article Published Date** : Aug 24, 2015

**Authors** : Miho Yoshida Yamakawa, Kazuyuki Uchino, Yasuhiro Watanabe, Tadashi Adachi, Mami Nakanishi, Hikari Ichino, Kunihiro Hongo, Tomohiro Mizobata, Saori Kobayashi, Kenji Nakashima, Yasushi Kawata

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : [Anthocyanins](#) : CK(332) : AC(114), [Bilberry](#) : CK(108) : AC(26)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Black Pepper (AC 4) (CK 7)

**A methanolic extract of Piper nigrum ameliorates beta-amyloid (1-42)-induced anxiety and depression by attenuation of the oxidative stress in the rat amygdala.**

**Pubmed Data** : Behav Brain Funct. 2015 ;11:13. Epub 2015 Mar 29. PMID: [25880991](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Lucian Hritcu, Jaurès A Noumedem, Oana Cioanca, Monica Hancianu, Paula Postu, Marius Mihasan

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Black Pepper](#) : CK(229) : AC(96)

**Diseases :** [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Anxiety Disorders](#) : CK(1215) : AC(180) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions :** [Anti-Apoptotic](#) : CK(360) : AC(201) , [Antioxidants](#) : CK(7191) : AC(2630) , [Anxiolytic](#) : CK(369) : AC(56) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords :** [Plant Extracts](#) : CK(7288) : AC(2419)

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**Nutraceuticals derived from such spices as turmeric, red pepper, black pepper, licorice, clove, ginger, garlic, coriander, and cinnamon target inflammatory pathways, thereby preventing neurodegenerative diseases.**

**Pubmed Data :** Mol Neurobiol. 2011 Oct ;44(2):142-59. Epub 2011 Mar 1. PMID: [21360003](#)

**Article Published Date :** Oct 01, 2011

**Authors :** Ramaswamy Kannappan, Subash Chandra Gupta, Ji Hye Kim, Simone Reuter, Bharat Bhushan Aggarwal

**Study Type :** Review

**Additional Links**

**Substances :** [Black Pepper](#) : CK(229) : AC(96) , [Cinnamon](#) : CK(243) : AC(88) , [Clove](#) : CK(104) : AC(55) , [Coriander](#) : CK(1) : AC(1) , [Garlic](#) : CK(712) : AC(225) , [Ginger](#) : CK(676) : AC(175) , [Licorice](#) : CK(345) : AC(110) , [Red Pepper](#) : CK(4) : AC(2)

**Diseases :** [Inflammation](#) : CK(2863) : AC(839) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords :** [Plant Extracts](#) : CK(7288) : AC(2419)

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**Piper nigrum significantly improved learning and memory deficits associated with aluminium chloride and also showed the anticholinesterase activity with prevention of nerve degeneration.**

**Pubmed Data :** J Clin Diagn Res. 2015 Apr ;9(4):FF01-4. Epub 2015 Apr 1. PMID: [26023568](#)

**Article Published Date :** Mar 31, 2015

**Authors :** Lokraj Subedee, R N Suresh, Jayanthi Mk, Kalabharathi HI, Satish Am, Pushpa Vh

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Black Pepper](#) : CK(229) : AC(96)

**Diseases :** [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions :** [Acetylcholinesterase Inhibitor](#) : CK(36) : AC(18) , [Antioxidants](#) : CK(7192) : AC(2631) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords :** [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Problem Substances :** [Aluminum Chloride](#) : CK(29) : AC(12)

## Piperine, the main alkaloid of Thai black pepper, protects against neurodegeneration and cognitive impairment in an animal model.

**Pubmed Data** : Food Chem Toxicol. 2009 Dec 23. Epub 2009 Dec 23. PMID: [20034530](#)

**Article Published Date** : Dec 23, 2009

**Authors** : [No authors listed]

**Study Type** : Animal Study

**Additional Links**

**Substances** : Black Pepper : CK(229) : AC(96), Piperine : CK(114) : AC(60)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

## Black Tea (AC 2) (CK 2)

The present review addresses how these tea constituents work at the cellular level to render effective control of disease syndromes and suggests that tea synergizes with established drugs.

**Pubmed Data** : Neurochem Int. 2015 Aug 10. Epub 2015 Aug 10. PMID: [26271432](#)

**Article Published Date** : Aug 09, 2015

**Authors** : Debashis Dutta, Kochupurackal P Mohanakumar

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80), Catechin : CK(512) : AC(169), Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333)

**Diseases** : Oxidative Stress : CK(3799) : AC(1356), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Natural Substance/Drug Synergy : CK(349) : AC(140)

This review collates the current knowledge of tea polyphenols and puts into perspective their potential to be considered as nutraceuticals that target various

## pathologies in PD.

**Pubmed Data** : Adv Exp Med Biol. 2015;863:117-137. PMID: [26092629](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Mario Caruana, Neville Vassallo

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333), Tea : CK(1840) : AC(385), Theaflavins : CK(1) : AC(1)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59), Neuroprotective Agents : CK(2237) : AC(1053)

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## Blueberry (AC 3) (CK 5)

**A combination of blueberry, green tea and carnosine have a neuritogenic, and stem-cell regenerative effects in an animal model of neurodegenerative disease.**

**Pubmed Data** : Rejuvenation Res. 2010 Jun 29. Epub 2010 Jun 29. PMID: [20586644](#)

**Article Published Date** : Jun 29, 2010

**Authors** : S Acosta, J Jernberg, C D Sanberg, P R Sanberg, Brent J Small, Carmelina Gemma, Paula C Bickford

**Study Type** : Animal Study

**Additional Links**

**Substances** : Blueberry : CK(258) : AC(89)

**Diseases** : Neurodegenerative Diseases : CK(3376) : AC(850)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59)

**Additional Keywords** : Stem Cell Generation : CK(16) : AC(5)

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**Blueberry polyphenols may reduce neurodegenerative diseases.**

**Pubmed Data** : Nutr Neurosci. 2008 Aug;11(4):172-82. PMID: [18681986](#)

**Article Published Date** : Aug 01, 2008

**Authors** : Barbara Shukitt-Hale, Francis C Lau, Amanda N Carey, Rachel L Galli, Edward L Spangler, Donald K Ingram, James A Joseph

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Blueberry](#) : CK(258) : AC(89)

**Diseases :** [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**Mice experienced a significant improvements in cognitive function, biochemical and histological indicators of AD after consuming a nutrient mix for up to 7 months.**

**Pubmed Data :** PLoS One. 2015;10(11):e0143135. Epub 2015 Nov 25. PMID: [26606074](#)

**Article Published Date :** Dec 31, 2014

**Authors :** Shengyuan Wang, Yu Cu, Chao Wang, Wei Xie, Lan Ma, Jinfeng Zhu, Yan Zhang, Rui Dang, Decai Wang, Yonghui Wu, Qunhong Wu

**Study Type :** Transgenic Animal Study

**Additional Links**

**Substances :** [Blueberry](#) : CK(258) : AC(89), [DHA \(Docosahexaenoic Acid\)](#) : CK(783) : AC(129), [EPA \(Eicosapentaenoic Acid\)](#) : CK(758) : AC(105)

**Diseases :** [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Broccoli Sprouts (AC 1) (CK 1)

**Raw broccoli sprouts juice was shown here to protect against A $\beta$ -induced cytotoxicity and apoptosis.**

**Pubmed Data :** Oxid Med Cell Longev. 2015 ;2015:781938. Epub 2015 Jun 9. PMID: [26180595](#)

**Article Published Date :** Dec 31, 2014

**Authors :** Alessandra Masci, Roberto Mattioli, Paolo Costantino, Simona Baima, Giorgio Morelli, Pasqualina Punzi, Cesare Giordano, Alessandro Pinto, Lorenzo Maria Donini, Maria d'Erme, Luciana Mosca

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Broccoli Sprouts](#) : CK(10) : AC(1)

**Diseases :** [Alzheimer's Disease](#) : CK(1282) : AC(375), [Brain: Oxidative Stress](#) : CK(75) : AC(44)

**Pharmacological Actions :** [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [NF-E2-Related Factor-2 \(Nrf2\) Modulator](#) : CK(45) : AC(24), [Nrf2 activation](#) : CK(172) : AC(83), [Phase II Detoxification Enzyme Inducer](#) : CK(78) : AC(40)

**Additional Keywords :** [Phase II Detoxification Enzyme Inducer](#) : CK(78) : AC(40)

## Brussel sprouts (AC 1) (CK 1)

**Brussels sprouts could be protective against A $\beta$ -induced neurotoxicity, possibly due to the antioxidative capacity of its major constituent, kaempferol.**

**Pubmed Data** : J Med Food. 2013 Nov ;16(11):1057-61. Epub 2013 Oct 31. PMID: [24175656](#)

**Article Published Date** : Oct 31, 2013

**Authors** : Jae Kyeom Kim, Eui-Cheol Shin, Cho Rong Kim, Gwi Gun Park, Soo Jung Choi, Cheung-Seog Park, Dong-Hoon Shin

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Brussel sprouts : CK(17) : AC(6)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

## Butyrate (AC 1) (CK 1)

**A high fiber diet in the gut might alter gene expression in the brain to prevent neurodegeneration and promote regeneration.**

**Pubmed Data** : Neurosci Lett. 2016 Feb 8. Epub 2016 Feb 8. PMID: [26868600](#)

**Article Published Date** : Feb 07, 2016

**Authors** : Megan W Bourassa, Ishraq Alim, Scott J Bultman, Rajiv R Ratan

**Study Type** : Review

**Additional Links**

**Substances** : Butyrate : CK(3) : AC(3), Fiber : CK(808) : AC(103), Probiotics : CK(2852) : AC(361)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Neuroprotective Agents : CK(2237) : AC(1053) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Caffeine (AC 2) (CK 11)

### Caffeine in coffee can prevent and help brain function in Alzheimer's Disease

**Pubmed Data** : Curr Neuropharmacol. 2009 Sep ;7(3):207-16. PMID: [20190962](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Anisur Rahman

**Study Type** : Human Study, Review, Transgenic Animal Study

**Additional Links**

**Substances** : Caffeine : CK(177) : AC(30) , Coffee : CK(786) : AC(101)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

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### Coffee and caffeine chronologically enhanced the antiamyloidogenic activity of melatonin through suppression of A $\beta$ oligomerization.

**Pubmed Data** : Drug Des Devel Ther. 2015 ;9:241-72. Epub 2014 Dec 24. PMID: [25565776](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Li-Fang Zhang, Zhi-Wei Zhou, Zhen-Hai Wang, Yan-Hui Du, Zhi-Xu He, Chuanhai Cao, Shu-Feng Zhou

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Caffeine : CK(177) : AC(30) , Coffee : CK(746) : AC(99) , Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052), Nrf2 activation : CK(172) : AC(83)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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## Caffeoylquinic Acids (AC 1) (CK 2)

## A purple sweet potato extract rich in caffeoylquinic acids had a neuroprotective effect on mouse brain and could improve the spatial learning and memory.

**Pubmed Data** : J Agric Food Chem. 2013 May 29 ;61(21):5037-45. Epub 2013 May 16. PMID: [23647122](#)

**Article Published Date** : May 28, 2013

**Authors** : Kazunori Sasaki, Junkyu Han, Hidetoshi Shimozone, Myra O Villareal, Hiroko Isoda

**Study Type** : Animal Study

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114), Caffeoylquinic Acids : CK(1) : AC(1), Sweet Potato: Purple : CK(43) : AC(26)

**Diseases** : Learning disorders : CK(188) : AC(50), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

## Cannabidiol (AC 7) (CK 8)

### A review of phytochemicals and their neuroprotective effects in the treatment of dementia.

**Pubmed Data** : Molecules. 2016 ;21(4). Epub 2016 Apr 21. PMID: [27110749](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Rosaliana Libro, Sabrina Giacoppo, Thangavelu Soundara Rajan, Placido Bramanti, Emanuela Mazzon

**Study Type** : Review

**Additional Links**

**Substances** : Cannabidiol : CK(1112) : AC(334), Cannabinoids : CK(700) : AC(272), Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

### CBD has a neurorestorative potential independent of NGF that might contribute to its neuroprotection against

## neurotoxins relevant to Parkinson's disease.

**Pubmed Data** : Toxicol In Vitro. 2015 Nov 7. Epub 2015 Nov 7. PMID: [26556726](#)

**Article Published Date** : Nov 06, 2015

**Authors** : Neife Aparecida Guinaim Santos, Nádia Maria Martins, Flávia Malvestio Sisti, Laís Silva Fernandes, Rafaela Scalco Ferreira, Regina Helena Costa Queiroz, Antônio Cardozo Santos

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Cannabidiol](#) : CK(1112) : AC(334)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Cannabidiol normalizes caspase 3, synaptophysin, and mitochondrial fission protein DNM1L expression levels in rats with brain iron overload.

**Pubmed Data** : Mol Neurobiol. 2014 Feb ;49(1):222-33. Epub 2013 Jul 28. PMID: [23893294](#)

**Article Published Date** : Jan 31, 2014

**Authors** : Vanessa Kappel da Silva, Betânia Souza de Freitas, Arethuzza da Silva Dornelles, Laura Roesler Nery, Lucio Falavigna, Rafael Dal Ponte Ferreira, Maurício Reis Bogo, Jaime Eduardo Cecílio Hallak, Antônio Waldo Zuardi, José Alexandre S Crippa, Nadja Schröder

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Cannabidiol](#) : CK(1112) : AC(334)

**Diseases** : [Iron Overload](#) : CK(31) : AC(17), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Cannabinoids have therapeutic potential in central nervous system disease.

**Pubmed Data** : Eur J Pharmacol. 2011 Jan 13. Epub 2011 Jan 13. PMID: [12617697](#)

**Article Published Date** : Jan 13, 2011

**Authors** : J Ludovic Croxford

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabidiol](#) : CK(1112) : AC(334), [Cannabis](#) : CK(1741) : AC(399)

**Diseases** : [Central Nervous System Diseases](#) : CK(6) : AC(6), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## The marijuana component cannabidiol has a

## neuroprotective effect on beta-amyloid-induced neuronal changes.

**Pubmed Data** : J Mol Med. 2006 Mar;84(3):253-8. Epub 2005 Dec 31. PMID: [16389547](#)

**Article Published Date** : Mar 01, 2006

**Authors** : Giuseppe Esposito, Daniele De Filippis, Rosa Carnuccio, Angelo A Izzo, Teresa Iuvone

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Cannabidiol : CK(1112) : AC(334), Cannabis : CK(1741) : AC(399)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## This reviews the in-vitro and in-vivo evidence for the therapeutic potential of CBD in Alzheimer's disease.

**Pubmed Data** : Behav Pharmacol. 2016 Jul 28. Epub 2016 Jul 28. PMID: [27471947](#)

**Article Published Date** : Jul 27, 2016

**Authors** : Tim Karl, Brett Garner, David Cheng

**Study Type** : Review

**Additional Links**

**Substances** : Cannabidiol : CK(1115) : AC(338)

**Diseases** : Alzheimer's Disease : CK(1284) : AC(377)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4512) : AC(1582), Antioxidants : CK(7211) : AC(2639), Neuroprotective Agents : CK(2243) : AC(1057)

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## This summarizes the therapeutic effects of CBD and their relevance to brain function, neuroprotection and neuropsychiatric disorders.

**Pubmed Data** : Pharmacol Res. 2016 Feb 1. Epub 2016 Feb 1. PMID: [26845349](#)

**Article Published Date** : Jan 31, 2016

**Authors** : Alline C Campos, Manoela V Fogaça, Andreza B Sonego, Francisco S Guimarães

**Study Type** : Review

**Additional Links**

**Substances** : Cannabidiol : CK(1112) : AC(334)

**Diseases** : Anxiety Disorders : CK(1215) : AC(180), Brain Damage : CK(93) : AC(44), Brain Ischemia : CK(136) : AC(52), Depression : CK(1818) : AC(262), Neurodegenerative Diseases : CK(3370) : AC(846), Psychiatric Disorders : CK(110) : AC(27)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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# Cannabinoids (AC 20) (CK 29)

## A cannabinoid CB2 receptor selective compound, delays disease progression in a mouse model of amyotrophic lateral sclerosis.

**Pubmed Data** : Eur J Pharmacol. 2006 Aug 7;542(1-3):100-5. Epub 2006 May 20. PMID: [16781706](#)

**Article Published Date** : Aug 07, 2006

**Authors** : Kathline Kim, Dan H Moore, Alexandros Makriyannis, Mary E Abood

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## A review of phytochemicals and their neuroprotective effects in the treatment of dementia.

**Pubmed Data** : Molecules. 2016 ;21(4). Epub 2016 Apr 21. PMID: [27110749](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Rosaliana Libro, Sabrina Giacoppo, Thangavelu Soundara Rajan, Placido Bramanti, Emanuela Mazzon

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabidiol](#) : CK(1112) : AC(334), [Cannabinoids](#) : CK(700) : AC(272), [Flavonoids](#) : CK(1194) : AC(376), [Polyphenols](#) : CK(920) : AC(333)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## A review of the many benefits of cannabinoids in health and disease.

**Pubmed Data** : Dialogues Clin Neurosci. 2007 ;9(4):413-30. PMID: [18286801](#)

**Article Published Date** : Dec 31, 2006

**Authors** : Natalya M Kogan, Raphael Mechoulam

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272), [Cannabinoids: Synthetic](#) : CK(78) : AC(33)

**Diseases** : [Anorexia](#) : CK(73) : AC(9), [Cancers: All](#) : CK(14297) : AC(4542), [Epilepsy](#) : CK(248) : AC(62), [Inflammation](#) : CK(2862) : AC(838), [Multiple Sclerosis](#) : CK(953) : AC(182), [Neurodegenerative](#)

## A review of the promising aspects of cannabinoid-based therapies for Parkinson's disease.

**Pubmed Data** : Mol Neurodegener. 2015 ;10:17. Epub 2015 Apr 8. PMID: [25888232](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Sandeep Vasant More, Dong-Kug Choi

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272), [Cannabinoids: Synthetic](#) : CK(78) : AC(33)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Agents modulating cannabinoid receptors or endocannabinoid tone provide promising therapeutic opportunities in the treatment of inflammatory neurodegenerative disorders of the CNS.

**Pubmed Data** : Exp Neurol. 2010 Jul ;224(1):92-102. Epub 2010 Mar 29. PMID: [20353778](#)

**Article Published Date** : Jun 30, 2010

**Authors** : Silvia Rossi, Giorgio Bernardi, Diego Centonze

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140), [Inflammation](#) : CK(2862) : AC(838), [Multiple Sclerosis](#) : CK(953) : AC(182), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Cannabigerol could be used for the treatment of neurodegenerative diseases such as Huntington's disease.

**Pubmed Data** : Neurotherapeutics. 2015 Jan ;12(1):185-99. PMID: [25252936](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Sara Valdeolivas, Carmen Navarrete, Irene Cantarero, María L Bellido, Eduardo Muñoz, Onintza Sagredo

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Huntington Disease](#) : CK(84) : AC(32), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Cannabinoids may provide a safer alternative treatment option for the management of agitation and aggression in AD.

**Pubmed Data** : Curr Alzheimer Res. 2016 May 2. Epub 2016 May 2. PMID: [27137221](#)

**Article Published Date** : May 01, 2016

**Authors** : Celina S Liu, Myuri Ruthirakuhan, Sarah A Chau, Nathan Herrmann, André F Carvalho, Krista L Lanctôt

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## Cannabinoids may therapeutic value in neurodegenerative conditions and cancer.

**Pubmed Data** : J Mol Med. 2001;78(11):613-25. PMID: [11269508](#)

**Article Published Date** : Jan 01, 2001

**Authors** : M Guzmán, C Sánchez, I Galve-Roperh

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Cancers: All](#) : CK(14296) : AC(4541) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Antiproliferative](#) : CK(2461) : AC(1673), [Apoptotic](#) : CK(2941) : AC(2062) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Cannabinol may have therapeutic value in ameliorating symptoms in ALS.

**Pubmed Data** : Amyotroph Lateral Scler Other Motor Neuron Disord. 2005 Sep;6(3):182-4. PMID: [16183560](#)

**Article Published Date** : Sep 01, 2005

**Authors** : Patrick Weydt, Soyoon Hong, Anke Witting, Thomas Möller, Nephi Stella, Michel Kliot

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(705) : AC(276), [Cannabis](#) : CK(1741) : AC(399)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

---

## Cannabis contains a number of compounds which may have therapeutic value in delaying the progression of ALS.

**Pubmed Data** : Amyotroph Lateral Scler Other Motor Neuron Disord. 2004 Mar;5(1):33-9. PMID: [15204022](#)

**Article Published Date** : Mar 01, 2004

**Authors** : Chandrasekaran Raman, Sean D McAllister, Gulrukh Rizvi, Sonal G Patel, Dan H Moore, Mary E Abood

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272), [Cannabis](#) : CK(1741) : AC(399)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Cannabis has potential therapeutic value in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : Am J Hosp Palliat Care. 2010 Aug;27(5):347-56. Epub 2010 May 3. PMID: [20439484](#)

**Article Published Date** : Aug 01, 2010

**Authors** : Gregory T Carter, Mary E Abood, Sunil K Aggarwal, Michael D Weiss

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272), [Cannabis](#) : CK(1741) : AC(399)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573), [Antineoplastic Agents](#) : CK(1158) : AC(639), [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

---

## THC mediates neuroprotection via PPAR $\gamma$ -dependent restoration of mitochondrial content which may be beneficial for PD treatment.

**Pubmed Data** : Oncotarget. 2016 Jun 27. Epub 2016 Jun 27. PMID: [27366949](#)

**Article Published Date** : Jun 26, 2016

**Authors** : Marie-Louise Zeissler, Jordan Eastwood, Kieran McCorry, C Oliver Hanemann, John P Zajicek, Camille B Carroll

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(705) : AC(276), [Delta-tetrahydrocannabinol \(THC\)](#) : CK(1117) : AC(338)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2241) : AC(1056)

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## Tetrahydrocannabivarin could be used for delaying disease progression in PD and also for ameliorating

## **parkinsonian symptoms.**

**Pubmed Data** : Br J Pharmacol. 2011 Aug ;163(7):1495-506. PMID: [21323909](#)

**Article Published Date** : Jul 31, 2011

**Authors** : C García, C Palomo-Garo, M García-Arencibia, Ja Ramos, Rg Pertwee, J Fernández-Ruiz

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## **The CB2 cannabinoid agonist AM-1241 prolongs survival (56%) in a transgenic mouse model of amyotrophic lateral sclerosis when initiated at symptom onset.**

**Pubmed Data** : Curr Eye Res. 2005 Jul;30(7):583-91. PMID: [17241118](#)

**Article Published Date** : Jul 01, 2005

**Authors** : Jennifer L Shoemaker, Kathryn A Seely, Ronald L Reed, John P Crow, Paul L Prather

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## **The current article provides an overview of the potential of cannabinoids in the treatment of late-onset Alzheimer's disease.**

**Pubmed Data** : Clin Pharmacol Ther. 2015 Jun ;97(6):597-606. Epub 2015 Apr 17. PMID: [25788394](#)

**Article Published Date** : May 31, 2015

**Authors** : Aia Ahmed, M A van der Marck, Gah van den Elsen, Mgm Olde Rikkert

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Aging](#) : CK(1581) : AC(428), [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## **The endocannabinoid system may play a valuable role in the development of treatment options for amyotrophic lateral sclerosis.**

**Pubmed Data** : Curr Pharm Des. 2008;14(23):2306-16. PMID: [18781981](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Lynsey G Bilsland, Linda Greensmith

**Study Type** : Review

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Endocannabinoid Disorders](#) : CK(15) : AC(9), [Endocannabinoid System](#) : CK(16) : AC(6)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2285) : AC(299)

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## These findings constitute the first evidence for an astroprotective role of cannabinoids.

**Pubmed Data** : J Biol Chem. 2002 Sep 27 ;277(39):36527-33. Epub 2002 Jul 19. PMID: [12133838](#)

**Article Published Date** : Sep 26, 2002

**Authors** : Teresa Gómez Del Pulgar, Maria L De Ceballos, Manuel Guzmán, Guillermo Velasco

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400)

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## These results support the view of a potential neuroprotective action of cannabinoids against the in vivo and in vitro toxicity of 6-hydroxydopamine.

**Pubmed Data** : Neurobiol Dis. 2005 Jun-Jul;19(1-2):96-107. PMID: [15837565](#)

**Article Published Date** : May 31, 2005

**Authors** : Isabel Lastres-Becker, Francisco Molina-Holgado, José A Ramos, Raphael Mechoulam, Javier Fernández-Ruiz

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : [Cannabinoids](#) : CK(700) : AC(272), [Delta-tetrahydrocannabinol \(THC\)](#) : CK(1112) : AC(334)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

---

## This review details the mechanisms of

## neurodegeneration and highlights the beneficial effects of cannabinoid treatment.

**Pubmed Data** : Br J Pharmacol. 2014 Mar ;171(6):1347-60. PMID: [24172185](#)

**Article Published Date** : Feb 28, 2014

**Authors** : S G Fagan, V A Campbell

**Study Type** : Review

### Additional Links

**Substances** : Cannabinoids : CK(700) : AC(272), Cannabis : CK(1741) : AC(399)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140), Huntington Disease : CK(84) : AC(32), Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Neurogenesis : CK(59) : AC(30), Neuroprotective Agents : CK(2235) : AC(1052)

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## This reviews the basis for the use of cannabinoids in the treatment of cancers and neurodegenerative diseases.

**Pubmed Data** : Handb Exp Pharmacol. 2005(168):627-42. PMID: [16596790](#)

**Article Published Date** : Dec 31, 2004

**Authors** : M Guzmán

**Study Type** : Review

### Additional Links

**Substances** : Cannabinoids : CK(700) : AC(272)

**Diseases** : Cancers: All : CK(14296) : AC(4541), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Angiogenic : CK(195) : AC(136), Antineoplastic Agents : CK(1158) : AC(639), Antiproliferative : CK(2461) : AC(1673), Apoptotic : CK(2941) : AC(2062), Neuroprotective Agents : CK(2235) : AC(1052)

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## Cannabinoids: Synthetic (AC 2) (CK 2)

### A review of the many benefits of cannabinoids in health and disease.

**Pubmed Data** : Dialogues Clin Neurosci. 2007 ;9(4):413-30. PMID: [18286801](#)

**Article Published Date** : Dec 31, 2006

**Authors** : Natalya M Kogan, Raphael Mechoulam

**Study Type** : Review

### Additional Links

**Substances** : Cannabinoids : CK(700) : AC(272), Cannabinoids: Synthetic : CK(78) : AC(33)

**Diseases** : Anorexia : CK(73) : AC(9), Cancers: All : CK(14297) : AC(4542), Epilepsy : CK(248) : AC(62), Inflammation : CK(2862) : AC(838), Multiple Sclerosis : CK(953) : AC(182), Neurodegenerative Diseases : CK(3370) : AC(846), Obesity : CK(2161) : AC(455), Schizophrenia : CK(434) : AC(68)

---

## A review of the promising aspects of cannabinoid-based therapies for Parkinson's disease.

**Pubmed Data** : Mol Neurodegener. 2015 ;10:17. Epub 2015 Apr 8. PMID: [25888232](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Sandeep Vasant More, Dong-Kug Choi

**Study Type** : Review

### Additional Links

**Substances** : Cannabinoids : CK(700) : AC(272), Cannabinoids: Synthetic : CK(78) : AC(33)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Neuroprotective Agents : CK(2235) : AC(1052)

---

## Cannabis (AC 10) (CK 24)

### Adding medical cannabis oil to AD patients' pharmacotherapy is safe and a promising treatment option.

**Pubmed Data** : J Alzheimers Dis. 2016 Jan 12. Epub 2016 Jan 12. PMID: [26757043](#)

**Article Published Date** : Jan 11, 2016

**Authors** : Assaf Shelef, Yoram Barak, Uri Berger, Diana Paleacu, Shelly Tadger, Igor Plopsy, Yehuda Baruch

**Study Type** : Human Study

### Additional Links

**Substances** : Cannabis : CK(1741) : AC(399)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Dementia : CK(571) : AC(79)

---

### Cannabidiol, a nonpsychoactive compound from cannabis, exhibits neuroprotective properties in binge ethanol-induced brain injury.

**Pubmed Data** : J Pharmacol Exp Ther. 2005 Aug;314(2):780-8. Epub 2005 May 5. PMID: [15878999](#)

**Article Published Date** : Aug 01, 2005

**Authors** : Carol Hamelink, Aidan Hampson, David A Wink, Lee E Eiden, Robert L Eskay

**Study Type** : Animal Study

**Additional Links**

**Substances** : Cannabis : CK(1741) : AC(399)

**Diseases** : Alcohol Toxicity : CK(294) : AC(119), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

---

## Cannabinoids have therapeutic potential in central nervous system disease.

**Pubmed Data** : Eur J Pharmacol. 2011 Jan 13. Epub 2011 Jan 13. PMID: [12617697](#)

**Article Published Date** : Jan 13, 2011

**Authors** : J Ludovic Croxford

**Study Type** : Review

**Additional Links**

**Substances** : Cannabidiol : CK(1112) : AC(334), Cannabis : CK(1741) : AC(399)

**Diseases** : Central Nervous System Diseases : CK(6) : AC(6), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

---

## Cannabinol may have therapeutic value in ameliorating symptoms in ALS.

**Pubmed Data** : Amyotroph Lateral Scler Other Motor Neuron Disord. 2005 Sep;6(3):182-4. PMID: [16183560](#)

**Article Published Date** : Sep 01, 2005

**Authors** : Patrick Weydt, Soyon Hong, Anke Witting, Thomas Möller, Nephi Stella, Michel Kliot

**Study Type** : Animal Study

**Additional Links**

**Substances** : Cannabinoids : CK(705) : AC(276), Cannabis : CK(1741) : AC(399)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

---

## Cannabis contains a number of compounds which may have therapeutic value in delaying the progression of ALS.

**Pubmed Data** : Amyotroph Lateral Scler Other Motor Neuron Disord. 2004 Mar;5(1):33-9. PMID: [15204022](#)

**Article Published Date** : Mar 01, 2004

**Authors** : Chandrasekaran Raman, Sean D McAllister, Gulrukh Rizvi, Sonal G Patel, Dan H Moore, Mary E Abood

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Cannabinoids : CK\(700\) : AC\(272\)](#), [Cannabis : CK\(1741\) : AC\(399\)](#)

**Diseases :** [Amyotrophic Lateral Sclerosis : CK\(567\) : AC\(140\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#)

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## **Cannabis has potential therapeutic value in the treatment of amyotrophic lateral sclerosis.**

**Pubmed Data :** Am J Hosp Palliat Care. 2010 Aug;27(5):347-56. Epub 2010 May 3. PMID: [20439484](#)

**Article Published Date :** Aug 01, 2010

**Authors :** Gregory T Carter, Mary E Abood, Sunil K Aggarwal, Michael D Weiss

**Study Type :** Review

**Additional Links**

**Substances :** [Cannabinoids : CK\(700\) : AC\(272\)](#), [Cannabis : CK\(1741\) : AC\(399\)](#)

**Diseases :** [Amyotrophic Lateral Sclerosis : CK\(567\) : AC\(140\)](#)

**Pharmacological Actions :** [Anti-Inflammatory Agents : CK\(4499\) : AC\(1573\)](#), [Antineoplastic Agents : CK\(1158\) : AC\(639\)](#), [Antioxidants : CK\(7191\) : AC\(2630\)](#), [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#)

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## **Cannabis use is not uncommon in ALS patients who reported significant benefits from its use.**

**Pubmed Data :** Am J Hosp Palliat Care. 2004 Mar-Apr;21(2):95-104. PMID: [15055508](#)

**Article Published Date :** Mar 01, 2004

**Authors :** Dagmar Amtmann, Patrick Weydt, Kurt L Johnson, Mark P Jensen, Gregory T Carter

**Study Type :** Human: Case Report

**Additional Links**

**Substances :** [Cannabis : CK\(1753\) : AC\(405\)](#)

**Diseases :** [Amyotrophic Lateral Sclerosis : CK\(567\) : AC\(140\)](#)

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## **It has been suggested that where it is legal to do so, marijuana should be considered in the pharmacological management of ALS.**

**Pubmed Data :** Am J Hosp Palliat Care. 2001 Jul-Aug;18(4):264-70. PMID: [11467101](#)

**Article Published Date :** Jul 01, 2001

**Authors :** G T Carter, B S Rosen

**Study Type :** Review

**Additional Links**

**Substances :** [Cannabis : CK\(1753\) : AC\(405\)](#)

**Diseases :** [Amyotrophic Lateral Sclerosis : CK\(567\) : AC\(140\)](#)

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## The marijuana component cannabidiol has a neuroprotective effect on beta-amyloid-induced neuronal changes.

**Pubmed Data** : J Mol Med. 2006 Mar;84(3):253-8. Epub 2005 Dec 31. PMID: [16389547](#)

**Article Published Date** : Mar 01, 2006

**Authors** : Giuseppe Esposito, Daniele De Filippis, Rosa Carnuccio, Angelo A Izzo, Teresa Iuvone

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Cannabidiol : CK(1112) : AC(334), Cannabis : CK(1741) : AC(399)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

## This review details the mechanisms of neurodegeneration and highlights the beneficial effects of cannabinoid treatment.

**Pubmed Data** : Br J Pharmacol. 2014 Mar ;171(6):1347-60. PMID: [24172185](#)

**Article Published Date** : Feb 28, 2014

**Authors** : S G Fagan, V A Campbell

**Study Type** : Review

**Additional Links**

**Substances** : Cannabinoids : CK(700) : AC(272), Cannabis : CK(1741) : AC(399)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140), Huntington Disease : CK(84) : AC(32), Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Neurogenesis : CK(59) : AC(30), Neuroprotective Agents : CK(2235) : AC(1052)

## Caprylic Acid (AC 2) (CK 5)

### Caprylic triglyceride as a novel therapeutic approach to effectively improve the performance and attenuate the symptoms due to the motor neuron loss in ALS disease.

**Pubmed Data** : PLoS One. 2012 ;7(11):e49191. Epub 2012 Nov 7. PMID: [23145119](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Wei Zhao, Merina Varghese, Prashant Vempati, Anastasiya Dzhun, Alice Cheng, Jun Wang, Dale Lange, Amanda Bilski, Irene Faravelli, Giulio Maria Pasinetti

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Caprylic Acid](#) : CK(6) : AC(4)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

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## Caprylic triglyceride improve certain cases of mild-to-moderate Alzheimer's disease.

**Article Published Date** : Dec 31, 2012

**Authors** : Steven Douglas Maynard, Jeff Gelblum

**Study Type** : Human: Case Report

**Additional Links**

**Substances** : [Caprylic Acid](#) : CK(6) : AC(4) , [Coconut Oil](#) : CK(177) : AC(38) , [Medium Chain Triglycerides](#) : CK(55) : AC(16)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

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## Cardamom (AC 1) (CK 1)

### Long-term consumption of aromatic compounds from spices could be effective in the prevention of Alzheimer's disease.

**Pubmed Data** : Nat Prod Commun. 2016 Apr ;11(4):507-10. PMID: [27396206](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Shinichi Matsumura, Kazuya Murata, Yuri Yoshioka, Hideaki Matsuda

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Cardamom](#) : CK(39) : AC(9) , [Cinnamon](#) : CK(243) : AC(88) , [Ginger](#) : CK(676) : AC(175) , [Long Pepper](#) : CK(14) : AC(8) , [Turmeric](#) : CK(4951) : AC(2343)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053) , [β-secretase Inhibitor](#) : CK(1) : AC(1)

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## Carnitine (AC 1) (CK 1)

### Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : Clin Nutr. 2009 Dec;28(6):604-17. Epub 2009 Sep 25. PMID: [19782443](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Barkha P Patel, Mazen J Hamadeh

**Study Type** : Commentary

#### Additional Links

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , Carnitine : CK(434) : AC(66) , Coenzyme Q10 : CK(941) : AC(140), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Folic Acid : CK(643) : AC(93), Ginkgo biloba : CK(796) : AC(161) , Melatonin : CK(946) : AC(304) , Red Wine Extract : CK(114) : AC(32), Vitamin E : CK(1656) : AC(290)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Carnitine, Acetyl-L- (AC 2) (CK 20)

### A multi-vitamin/nutrient formula has therapeutic value in early-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Dement. 2008 Dec-2009 Jan;23(6):571-85. Epub 2008 Dec 1. PMID: [19047474](#)

**Article Published Date** : Dec 01, 2008

**Authors** : Amy Chan, James Paskavitz, Ruth Remington, Shelly Rasmussen, Thomas B Shea

**Study Type** : Human Study

#### Additional Links

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-6 : CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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### A multi-vitamin/nutrient formula has therapeutic value in moderate-stage to later-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Dement. 2009 Feb-Mar;24(1):27-33. Epub 2008 Dec 3. PMID: [19056706](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Ruth Remington, Amy Chan, James Paskavitz, Thomas B Shea

**Study Type** : Human Study

**Additional Links**

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4), Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAME (S-adenosylmethionine) : CK(113) : AC(20), Vitamin B-12 : CK(770) : AC(103), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## Carnosic Acid (AC 3) (CK 3)

**Carnosic acid, a compound within Rosemary, stimulates nerve growth factor in human glioblastoma cells.**

**Pubmed Data** : Mol Cancer Ther. 2004 Oct;3(10):1239-48. PMID: [14600414](#)

**Article Published Date** : Oct 01, 2004

**Authors** : Kunio Kosaka, Toshio Yokoi

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Carnosic Acid : CK(21) : AC(16), Rosemary : CK(216) : AC(77)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(526) : AC(164)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59)

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**Polyphenol antioxidants have properties to treat neurodegenerative diseases.**

**Pubmed Data** : Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type** : Review

**Additional Links**

**Substances** : Allicin : CK(48) : AC(25), Carnosic Acid : CK(21) : AC(16), Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Isothiocyanate : CK(15) : AC(4), Quercetin : CK(557) : AC(246), Resveratrol : CK(1232) : AC(737), Rosmarinic acid : CK(21) : AC(11), Sulforaphane : CK(533) : AC(262)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** [Antioxidants : CK\(7191\) : AC\(2630\)](#), [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#)

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## Rosemary protects dopaminergic neuronal cells

**Pubmed Data :** Neuroreport. 2008 Aug 27;19(13):1301-4. PMID: [18695511](#)

**Article Published Date :** Aug 27, 2008

**Authors :** Jeong Ae Park, Seung Kim, Sook-Young Lee, Chun-Sung Kim, Do Kyung Kim, Sung-Jun Kim, Hong Sung Chun

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Carnosic Acid : CK\(21\) : AC\(16\)](#), [Rosemary : CK\(216\) : AC\(77\)](#)

**Diseases :** [Parkinson's Disease : CK\(526\) : AC\(164\)](#)

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## Carotenoids (AC 3) (CK 13)

### Defined cocktails of dietary factors at low concentrations might be a suitable strategy to reduce oxidative damage in neurodegenerative diseases.

**Pubmed Data :** Oxid Med Cell Longev. 2015;2015:217258. Epub 2015 Jul 8. PMID: [26236423](#)

**Article Published Date :** Dec 31, 2014

**Authors :** Flavio Amara, Miluscia Berbenni, Martina Fragni, Giampaolo Leoni, Sandra Viggiani, Vita Maria Ippolito, Marilena Larocca, Rocco Rossano, Lilia Alberghina, Paolo Riccio, Anna Maria Colangelo

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Antioxidant formulas : CK\(492\) : AC\(76\)](#), [Carotenoids : CK\(1620\) : AC\(306\)](#), [Polyphenols : CK\(920\) : AC\(333\)](#)

**Diseases :** [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#), [Oxidative Stress : CK\(3800\) : AC\(1357\)](#)

**Pharmacological Actions :** [Antioxidants : CK\(7191\) : AC\(2630\)](#), [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#)

**Additional Keywords :** [Dietary Concentrations : CK\(85\) : AC\(22\)](#), [Natural Substance Synergy : CK\(534\) : AC\(244\)](#), [Plant Extracts : CK\(7288\) : AC\(2419\)](#)

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**Maintaining higher concentrations of lutein in respect to plasma lipids may moderately decrease the risk of**

## dementia and Alzheimer's disease.

**Pubmed Data** : J Gerontol A Biol Sci Med Sci. 2015 Aug 18. Epub 2015 Aug 18. PMID: [26286605](#)

**Article Published Date** : Aug 17, 2015

**Authors** : Catherine Feart, Luc Letenneur, Catherine Helmer, Cécilia Samieri, Wolfgang Schalch, Stéphane Etheve, Cécile Delcourt, Jean-François Dartigues, Pascale Barberger-Gateau

**Study Type** : Human Study

### Additional Links

**Substances** : [Carotenoids](#) : CK(1620) : AC(306) , [Lutein](#) : CK(225) : AC(37)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Saffron extract or its active constituents, crocetin and crocin, could be useful as a treatment for neurodegenerative disorders accompanying memory impairment.

**Pubmed Data** : Indian J Biochem Biophys. 2009 Dec;46(6):503-6. PMID: [10815004](#)

**Article Published Date** : Dec 01, 2009

**Authors** : K Abe, H Saito

**Study Type** : Animal Study

### Additional Links

**Substances** : [Carotenoids](#) : CK(1620) : AC(306)

**Diseases** : [Learning disorders](#) : CK(188) : AC(50) , [Memory Disorders](#) : CK(340) : AC(103) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631)

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## Catechin (AC 8) (CK 20)

## Cocoa procyanidins attenuate lipid peroxidation associated neuronal cell death in a manner relevant to Alzheimer's disease.

**Pubmed Data** : Free Radic Biol Med. 2009 May 15;46(10):1319-27. Epub 2009 Feb 25. PMID: [19248828](#)

**Article Published Date** : May 15, 2009

**Authors** : Eun Sun Cho, Young Jin Jang, Nam Joo Kang, Mun Kyung Hwang, Yong Taek Kim, Ki Won Lee, Hyong Joo Lee

**Study Type** : Human Study

**Additional Links**

**Substances** : Catechin : CK(512) : AC(169)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Antioxidants : CK(7191) : AC(2630)

**Additional Keywords** : Proanthocyanidins : CK(203) : AC(54)

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## EGCG and curcumin suppress Alzheimer disease associated beta amyloid production.

**Pubmed Data** : Am J Physiol Heart Circ Physiol. 2005 Aug;289(2):H715-21. Epub 2005 Mar 18. PMID: [18695518](#)

**Article Published Date** : Aug 01, 2005

**Authors** : Yoshiari Shimmyo, Takeshi Kihara, Akinori Akaike, Tetsuhiro Niidome, Hachiro Sugimoto

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Catechin : CK(512) : AC(169), Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Oxidative Stress : CK(3799) : AC(1356)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Enzyme Inhibitors : CK(463) : AC(250), Neuroprotective Agents : CK(2235) : AC(1052)

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## EGCG can be used as an enhanced supplement for huperzine A to treat Alzheimer's disease.

**Pubmed Data** : Nutr Neurosci. 2009 Aug;12(4):142-8. PMID: [19622237](#)

**Article Published Date** : Aug 01, 2009

**Authors** : Lei Zhang, Hui Cao, Jun Wen, Ming Xu

**Study Type** : Animal Study

**Additional Links**

**Substances** : Catechin : CK(512) : AC(169), Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anticarcinogenic Agents : CK(1071) : AC(514), Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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## Epicatechin and catechin in cocoa inhibit amyloid beta protein induced neuronal cell death.

**Pubmed Data** : J Agric Food Chem. 2005 Mar 9;53(5):1445-8. PMID: [15740021](#)

**Article Published Date** : Mar 09, 2005

**Authors :** Ho Jin Heo, Chang Yong Lee

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Catechin : CK(512) : AC(169)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** Anti-Apoptotic : CK(360) : AC(201) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Green tea extracts reversed the striatal oxidative stress and immunohistochemistry alterations in rats.

**Pubmed Data :** Evid Based Complement Alternat Med. 2015 ;2015:161092. Epub 2015 Jun 18. PMID: [26167188](#)

**Article Published Date :** Dec 31, 2014

**Authors :** Natália Bitu Pinto, Bruno da Silva Alexandre, Kelly Rose Tavares Neves, Aline Holanda Silva, Luzia Kalyne A M Leal, Glaucé S B Viana

**Study Type :** Animal Study

**Additional Links**

**Substances :** Catechin : CK(512) : AC(169), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Green Tea : CK(1934) : AC(549)

**Diseases :** Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions :** Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Kaempferol and Catechin produced a concentration dependent anti-fibrillogenic effects.

**Pubmed Data :** Int J Biol Macromol. 2015 Jul 29. Epub 2015 Jul 29. PMID: [26231329](#)

**Article Published Date :** Jul 28, 2015

**Authors :** Waseem Feeroze Bhat, Sheraz Ahmad Bhat, Bilqees Bano

**Study Type :** Animal Study

**Additional Links**

**Substances :** Catechin : CK(512) : AC(169), Kaempferol : CK(50) : AC(36)

**Diseases :** Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

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The present review addresses how these tea constituents work at the cellular level to render effective control of disease syndromes and suggests that tea synergizes with established drugs.

**Pubmed Data** : Neurochem Int. 2015 Aug 10. Epub 2015 Aug 10. PMID: [26271432](#)

**Article Published Date** : Aug 09, 2015

**Authors** : Debashis Dutta, Kochupurackal P Mohanakumar

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80), Catechin : CK(512) : AC(169), Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333)

**Diseases** : Oxidative Stress : CK(3799) : AC(1356), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Natural Substance/Drug Synergy : CK(349) : AC(140)

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**Whole-grape products are safer choices for better health and disease prevention. But for advanced disease conditions, individual grape ingredients or combinations appear to be better.**

**Pubmed Data** : Ann N Y Acad Sci. 2015 Jun 22. Epub 2015 Jun 22. PMID: [26099945](#)

**Article Published Date** : Jun 21, 2015

**Authors** : Chandra K Singh, Xiaoqi Liu, Nihal Ahmad

**Study Type** : Commentary

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114), Catechin : CK(512) : AC(169), Flavonoids : CK(1194) : AC(376), Grapes : CK(26) : AC(7), Polyphenols : CK(920) : AC(333), Resveratrol : CK(1232) : AC(737)

**Diseases** : Cancers: All : CK(14297) : AC(4542), Neurodegenerative Diseases : CK(3370) : AC(846)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Natural Substance Synergy : CK(534) : AC(244)

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## Catechols (AC 1) (CK 1)

**Catechols have anti-inflammatory effects in lipopolysaccharide-stimulated microglia cells, inhibiting neurotoxicity.**

**Pubmed Data** : Eur J Pharmacol. 2008 Jun 24;588(1):106-13. Epub 2008 Apr 18. PMID: [18499097](#)

**Article Published Date** : Jun 24, 2008

**Authors** : Long Tai Zheng, Geun-Mu Ryu, Byoung-Mog Kwon, Won-Ha Lee, Kyoung-ho Suk

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Acacia catechu : CK\(3\) : AC\(3\)](#), [Catechols : CK\(14\) : AC\(11\)](#)

**Diseases :** [Brain: Microglial Activation : CK\(82\) : AC\(53\)](#), [Brain Inflammation : CK\(246\) : AC\(140\)](#), [Lipopolysaccharide-Induced Toxicity : CK\(357\) : AC\(216\)](#), [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#)

**Pharmacological Actions :** [Anti-Inflammatory Agents : CK\(4500\) : AC\(1574\)](#), [Enzyme Inhibitors : CK\(463\) : AC\(250\)](#), [NF-kappaB Inhibitor : CK\(1100\) : AC\(686\)](#), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor : CK\(1752\) : AC\(641\)](#)

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## Chaenomeles speciosa (AC 1) (CK 2)

**Common flowering quince, the fruit of Chaenomeles speciosa, may have therapeutic value in the treatment of Parkinson disease and Parkinsonian disorders.**

**Pubmed Data :** [Pharmacol Biochem Behav. 2008 Sep;90\(3\):363-71. Epub 2008 Mar 30. PMID: 18485464](#)

**Article Published Date :** Sep 01, 2008

**Authors :** Gang Zhao, Zhi-Hua Jiang, Xiang-Wei Zheng, Shao-Yun Zang, Li-He Guo

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Chaenomeles speciosa : CK\(2\) : AC\(1\)](#)

**Diseases :** [Parkinson's Disease : CK\(526\) : AC\(164\)](#)

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## Chinese Skullcap (AC 4) (CK 6)

**A compound extracted from Chinese skullcap known as baicalein has neuroprotective effects in experimental parkinsonianism in vivo and in vitro.**

**Pubmed Data :** [Pharmacol Biochem Behav. 2009 Jun;92\(4\):642-8. Epub 2009 Mar 25. PMID: 19327378](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Xin Mu, Guorong He, Yinxia Cheng, Xiaoxiu Li, Bei Xu, Guanhua Du

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Chinese Skullcap](#) : CK(127) : AC(66)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164) , [Parkinsonism](#) : CK(12) : AC(8)

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## Chinese Scullcap (wogonin) has neuroprotective effect by preventing the overactivation of microglial cells.

**Pubmed Data** : Arch Pharm Res. 2004 Sep;27(9):930-6. PMID: [15473663](#)

**Article Published Date** : Sep 01, 2004

**Authors** : Hua Zi Piao, Shun Ai Jin, Hyang Sook Chun, Jae-Chul Lee, Won-Ki Kim

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Chinese Skullcap](#) : CK(127) : AC(66)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053) , [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1752) : AC(641)

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## Chinese skullcap (baicalein) protects dopaminergic cells and may have application in the treatment of Parkinson's disease

**Pubmed Data** : J Neural Transm. 2005 Mar;112(3):331-47. Epub 2004 Oct 22. PMID: [15503194](#)

**Article Published Date** : Mar 01, 2005

**Authors** : F-Q Li, T Wang, Z Pei, B Liu, J-S Hong

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Chinese Skullcap](#) : CK(127) : AC(66)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Lipopolysaccharide-Induced Damage](#) : CK(6) : AC(4)

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## Scutellaria biacalensis reverses aging-related cognitive impairment and neuronal changes in aged rats.

**Pubmed Data** : Brain Inj. 2009 Feb;23(2):146-53. PMID: [19191093](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Hong Ru Song, Jian Jun Cheng, Hong Miao, Ya Zhen Shang

**Study Type** : Animal Study

**Additional Links**

**Substances** : Chinese Skullcap : CK(127) : AC(66)

**Diseases** : Aging: Brain : CK(246) : AC(84), Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Chokeberry (AC 1) (CK 2)

**Chokeberry extract has potential as a therapeutic agent for the prevention and treatment of neurodegenerative diseases.**

**Pubmed Data** : Evid Based Complement Alternat Med. 2016 ;2016:6145926. Epub 2016 Apr 30. PMID: [27239211](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Hyeon Yong Lee, Jin Bae Weon, Youn Sik Jung, Nam Young Kim, Myong Ki Kim, Choong Je Ma

**Study Type** : Animal Study

**Additional Links**

**Substances** : Chokeberry : CK(158) : AC(43)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Memory Disorders: Drug-Induced : CK(99) : AC(25), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Acetylcholinesterase Inhibitor : CK(36) : AC(18)

**Additional Keywords** : Plant Extracts : CK(7290) : AC(2420)

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## Cholesterol (AC 1) (CK 10)

**Higher total serum cholesterol concentrations are associated with a modest slower clinical progression of Parkinson's disease.**

**Pubmed Data** : PLoS One. 2011 ;6(8):e22854. Epub 2011 Aug 11. PMID: [21853051](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Xuemei Huang, Peggy Auinger, Shirley Eberly, David Oakes, Michael Schwarzschild,

Alberto Ascherio, Richard Mailman, Honglei Chen,

**Study Type** : Human Study

**Additional Links**

**Substances** : [Cholesterol](#) : CK(403) : AC(45)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Chromium (AC 1) (CK 1)

**A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.**

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : [Chromium](#) : CK(56) : AC(12), [Cinnamon](#) : CK(243) : AC(88), [Cocoa](#) : CK(522) : AC(77), [DHA \(Docosahexaenoic Acid\)](#) : CK(783) : AC(129), [Fish Oil](#) : CK(701) : AC(111), [Folic Acid](#) : CK(643) : AC(93), [Genistein](#) : CK(515) : AC(228), [Hops](#) : CK(76) : AC(26), [Policosanols](#) : CK(194) : AC(25), [Sesame Seeds](#) : CK(235) : AC(71), [Vitamin D](#) : CK(3113) : AC(441)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

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## Chrysin (AC 1) (CK 2)

**Chrysin exerts beneficial effects to Parkinson's disease.**

**Pubmed Data** : J Agric Food Chem. 2016 Jul 6 ;64(26):5324-33. Epub 2016 Jun 21. PMID: [27245668](#)

**Article Published Date** : Jul 05, 2016

**Authors** : Baojian Guo, Chengyou Zheng, Wei Cai, Jiehong Cheng, Hongyu Wang, Haitao Li, Yewei Sun, Wei Cui, Yuqiang Wang, Yifan Han, Simon Ming-Yuen Lee, Zaijun Zhang

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : [Chrysin](#) : CK(65) : AC(42)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Monoamine Oxidase Inhibitors : CK(4) : AC(2) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Cinnamon (AC 5) (CK 6)

**A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.**

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : Chromium : CK(56) : AC(12) , Cinnamon : CK(243) : AC(88) , Cocoa : CK(522) : AC(77) , DHA (Docosahexaenoic Acid) : CK(783) : AC(129) , Fish Oil : CK(701) : AC(111) , Folic Acid : CK(643) : AC(93) , Genistein : CK(515) : AC(228) , Hops : CK(76) : AC(26) , Policosanol : CK(194) : AC(25) , Sesame Seeds : CK(235) : AC(71) , Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Neurodegenerative Diseases : CK(3370) : AC(846)

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**Cinnamon extract reduces  $\beta$ -amyloid oligomerization and corrects cognitive impairment in Alzheimer's disease animal models.**

**Pubmed Data** : PLoS One. 2011 ;6(1):e16564. Epub 2011 Jan 28. PMID: [21305046](#)

**Article Published Date** : Dec 31, 2010

**Authors** : Anat Frydman-Marom, Aviad Levin, Dorit Farfara, Tali Benromano, Roni Scherzer-Attali, Sivan Peled, Robert Vassar, Daniel Segal, Ehud Gazit, Dan Frenkel, Michael Ovadia

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Cinnamon : CK(243) : AC(88)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053) , Prophylactic Agents : CK(129) : AC(31)

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**Long-term consumption of aromatic compounds from**

## spices could be effective in the prevention of Alzheimer's disease.

**Pubmed Data** : Nat Prod Commun. 2016 Apr ;11(4):507-10. PMID: [27396206](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Shinichi Matsumura, Kazuya Murata, Yuri Yoshioka, Hideaki Matsuda

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Cardamom : CK(39) : AC(9), Cinnamon : CK(243) : AC(88), Ginger : CK(676) : AC(175), Long Pepper : CK(14) : AC(8), Turmeric : CK(4951) : AC(2343)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053),  $\beta$ -secretase Inhibitor : CK(1) : AC(1)

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## Nutraceuticals derived from such spices as turmeric, red pepper, black pepper, licorice, clove, ginger, garlic, coriander, and cinnamon target inflammatory pathways, thereby preventing neurodegenerative diseases.

**Pubmed Data** : Mol Neurobiol. 2011 Oct ;44(2):142-59. Epub 2011 Mar 1. PMID: [21360003](#)

**Article Published Date** : Oct 01, 2011

**Authors** : Ramaswamy Kannappan, Subash Chandra Gupta, Ji Hye Kim, Simone Reuter, Bharat Bhushan Aggarwal

**Study Type** : Review

### Additional Links

**Substances** : Black Pepper : CK(229) : AC(96), Cinnamon : CK(243) : AC(88), Clove : CK(104) : AC(55), Coriander : CK(1) : AC(1), Garlic : CK(712) : AC(225), Ginger : CK(676) : AC(175), Licorice : CK(345) : AC(110), Red Pepper : CK(4) : AC(2)

**Diseases** : Inflammation : CK(2863) : AC(839), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## This article presents a comprehensive analysis of the botanical, chemical, and pharmacological aspects of cinnamon.

**Pubmed Data** : J Tradit Complement Med. 2015 Apr ;5(2):66-70. Epub 2015 Jan 16. PMID: [26151013](#)

**Article Published Date** : Mar 31, 2015

**Authors** : Rafie Hamidpour, Mohsen Hamidpour, Soheila Hamidpour, Mina Shahlari

**Study Type** : Review

### Additional Links

**Substances** : Cinnamon : CK(243) : AC(88)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cancers: All : CK(14297) : AC(4542) , Diabetes Mellitus: Type 2 : CK(3344) : AC(592), Gastric Ulcer : CK(283) : AC(114) , Gram-Negative Bacterial Infections : CK(43) : AC(30), Gram-Positive Bacterial Infections : CK(33) : AC(27)  
**Pharmacological Actions** : Angiogenesis Inhibitors : CK(112) : AC(61) , Anti-Bacterial Agents : CK(1362) : AC(470), Anticholesteremic Agents : CK(1232) : AC(228) , Antifungal Agents : CK(233) : AC(145), Antioxidants : CK(7191) : AC(2630) , Vascular Endothelial Growth Factor Inhibitors : CK(123) : AC(61)  
**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Citrus Peel (AC 4) (CK 7)

### Nchinpi extracts potently facilitated CRE-mediated transcription in cultured hippocampal neurons.

**Pubmed Data** : J Neural Transm. 2013 Oct ;120(10):1397-409. Epub 2013 Apr 16. PMID: [23588349](#)

**Article Published Date** : Sep 30, 2013

**Authors** : Ichiro Kawahata, Masaaki Yoshida, Wen Sun, Akira Nakajima, Yanxin Lai, Naoya Osaka, Kentaro Matsuzaki, Akihito Yokosuka, Yoshihiro Mimaki, Akira Naganuma, Yoshihisa Tomioka, Tohru Yamakuni

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : Citrus Peel : CK(65) : AC(8), Nobiletin : CK(34) : AC(1), Orange: Mandarin : CK(6) : AC(2), Tangeretin : CK(17) : AC(9)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79) , Learning disorders : CK(188) : AC(50) , Neurologic Disorders : CK(65) : AC(29)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244) , Plant Extracts : CK(7288) : AC(2419)

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### Nobiletin prevents memory impairment and exhibits a protecting action against neurodegeneration in a alzheimer's disease model.

**Pubmed Data** : Yakugaku Zasshi. 2015 ;135(3):449-64. PMID: [25759053](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Yasushi Ohizumi

**Study Type** : Animal Study

#### Additional Links

**Substances** : Citrus Peel : CK(65) : AC(8), Nobiletin : CK(34) : AC(1)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Nobiletin reduced the levels of soluble A $\beta$ 1-40 in the brain of 3XTg-AD mice and reduced ROS levels in the hippocampus of 3XTg-AD as well as wild-type mice.

**Pubmed Data** : Behav Brain Res. 2015 Aug 1 ;289:69-77. Epub 2015 Apr 22. PMID: [25913833](#)

**Article Published Date** : Jul 31, 2015

**Authors** : Akira Nakajima, Yuki Aoyama, Eun-Joo Shin, Yunsung Nam, Hyoung-Chun Kim, Taku Nagai, Akihito Yokosuka, Yoshihiro Mimaki, Tsuyoshi Yokoi, Yasushi Ohizumi, Kiyofumi Yamada

**Study Type** : Animal Study, Transgenic Animal Study

**Additional Links**

**Substances** : Citrus Peel : CK(65) : AC(8), Nobiletin : CK(34) : AC(1)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Disease Reversal : CK(65) : AC(17)

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## Tangerine peel possesses potent anti-neuroinflammatory capacity which is attributed to the collective effect of hesperidin, nobiletin, and tangeretin.

**Pubmed Data** : Food Chem Toxicol. 2014 Sep ;71:176-82. Epub 2014 Jun 20. PMID: [24955543](#)

**Article Published Date** : Aug 31, 2014

**Authors** : Su-Chen Ho, Chun-Ting Kuo

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Citrus Peel : CK(65) : AC(8), Hesperidin : CK(196) : AC(53), Nobiletin : CK(34) : AC(1), Tangeretin : CK(17) : AC(9)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Inflammation : CK(2863) : AC(839) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Interleukin-1 beta downregulation : CK(452) : AC(199), Interleukin-6 Downregulation : CK(1078) : AC(337) , Neuroprotective Agents : CK(2235) : AC(1052) , Nitric Oxide Inhibitor : CK(223) : AC(108) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244) , Plant Extracts : CK(7288) : AC(2419)

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## Clove (AC 1) (CK 1)

**Nutraceuticals derived from such spices as turmeric, red pepper, black pepper, licorice, clove, ginger, garlic, coriander, and cinnamon target inflammatory pathways, thereby preventing neurodegenerative diseases.**

**Pubmed Data** : Mol Neurobiol. 2011 Oct ;44(2):142-59. Epub 2011 Mar 1. PMID: [21360003](#)

**Article Published Date** : Oct 01, 2011

**Authors** : Ramaswamy Kannappan, Subash Chandra Gupta, Ji Hye Kim, Simone Reuter, Bharat Bhushan Aggarwal

**Study Type** : Review

**Additional Links**

**Substances** : Black Pepper : CK(229) : AC(96), Cinnamon : CK(243) : AC(88), Clove : CK(104) : AC(55), Coriander : CK(1) : AC(1), Garlic : CK(712) : AC(225), Ginger : CK(676) : AC(175), Licorice : CK(345) : AC(110), Red Pepper : CK(4) : AC(2)

**Diseases** : Inflammation : CK(2863) : AC(839), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

## Cocoa (AC 2) (CK 2)

**A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.**

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : Chromium : CK(56) : AC(12), Cinnamon : CK(243) : AC(88), Cocoa : CK(522) : AC(77), DHA (Docosahexaenoic Acid) : CK(783) : AC(129), Fish Oil : CK(701) : AC(111), Folic Acid : CK(643) : AC(93), Genistein : CK(515) : AC(228), Hops : CK(76) : AC(26), Policosanol : CK(194) : AC(25), Sesame Seeds : CK(235) : AC(71), Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Neurodegenerative Diseases : CK(3370) : AC(846)

## Cocoa extracts may beneficially influence cognitive deterioration, while promoting healthy brain aging.

**Pubmed Data** : J Alzheimers Dis. 2015 ;48(4):879-89. PMID: [26402120](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Lauren Dubner, Jun Wang, Lap Ho, Libby Ward, Giulio M Pasinetti

**Study Type** : Review

**Additional Links**

**Substances** : Cocoa : CK(522) : AC(77)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Coconut (AC 2) (CK 11)

### Medium Chain Triglycerides (coconut fat) increase cognitive performance in Alzheimer's disease.

**Pubmed Data** : [Neurobiol Aging](#). 2004 Mar;25(3):311-4. PMID: [15123336](#)

**Article Published Date** : Mar 22, 2006

**Authors** : Mark A Reger, Samuel T Henderson, Cathy Hale, Brenna Cholerton, Laura D Baker, G S Watson, Karen Hyde, Darla Chapman, Suzanne Craft

**Study Type** : Human Study

**Additional Links**

**Substances** : Coconut : CK(404) : AC(75), Coconut Oil : CK(177) : AC(38), Medium Chain Triglycerides : CK(55) : AC(16)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Cognitive Decline/Dysfunction : CK(1138) : AC(212)

---

### Phenolic compounds and hormones (cytokinins) found in coconut may assist in preventing the aggregation of amyloid- $\beta$ peptide, potentially inhibiting a key step in the pathogenesis of AD.

**Pubmed Data** : Br J Nutr. 2015 May 22;1-14. Epub 2015 May 22. PMID: [25997382](#)

**Article Published Date** : May 21, 2015

**Authors** : W M A D B Fernando, Ian J Martins, K G Goozee, Charles S Brennan, V Jayasena, R N

Martins

**Study Type** : Review

**Additional Links**

**Substances** : [Coconut](#) : CK(404) : AC(75), [Coconut Oil](#) : CK(177) : AC(38)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376), [Dyslipidemias](#) : CK(389) : AC(74), [Hypertension](#) : CK(2843) : AC(395), [Insulin Resistance](#) : CK(1656) : AC(340)

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## Coconut Oil (AC 5) (CK 25)

### Caprylic triglyceride improve certain cases of mild-to-moderate Alzheimer's disease.

**Article Published Date** : Dec 31, 2012

**Authors** : Steven Douglas Maynard, Jeff Gelblum

**Study Type** : Human: Case Report

**Additional Links**

**Substances** : [Caprylic Acid](#) : CK(6) : AC(4), [Coconut Oil](#) : CK(177) : AC(38), [Medium Chain Triglycerides](#) : CK(55) : AC(16)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

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### Coconut Oil Attenuates the Effects of Amyloid- $\beta$ on Cortical Neurons In Vitro.

**Article Published Date** : Oct 21, 2013

**Authors** : Firoozeh Nafar, Karen M Mearow

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Coconut Oil](#) : CK(177) : AC(38)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Neurorestorative](#) : CK(71) : AC(21)

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### Coconut oil was found to be beneficial in female patients with Alzheimer's dementia.

**Pubmed Data** : Nutr Hosp. 2015 ;32(6):2822-7. Epub 2015 Dec 1. PMID: [26667739](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Iván Hu Yang, Jose Enrique De la Rubia Ortí, Pablo Selvi Sabater, Sandra Sancho Castillo, Mariano Julián Rochina, Noemí Manresa Ramón, Inmaculada Montoya-Castilla

**Study Type** : Human Study

**Additional Links**

**Substances** : [Coconut Oil](#) : CK(177) : AC(38)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

---

## Medium Chain Triglycerides (coconut fat) increase cognitive performance in Alzheimer's disease.

**Pubmed Data** : [Neurobiol Aging](#). 2004 Mar;25(3):311-4. PMID: [15123336](#)

**Article Published Date** : Mar 22, 2006

**Authors** : Mark A Reger, Samuel T Henderson, Cathy Hale, Brenna Cholerton, Laura D Baker, G S Watson, Karen Hyde, Darla Chapman, Suzanne Craft

**Study Type** : Human Study

**Additional Links**

**Substances** : [Coconut](#) : CK(404) : AC(75) , [Coconut Oil](#) : CK(177) : AC(38) , [Medium Chain Triglycerides](#) : CK(55) : AC(16)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

---

## Phenolic compounds and hormones (cytokinins) found in coconut may assist in preventing the aggregation of amyloid- $\beta$ peptide, potentially inhibiting a key step in the pathogenesis of AD.

**Pubmed Data** : [Br J Nutr](#). 2015 May 22;1-14. Epub 2015 May 22. PMID: [25997382](#)

**Article Published Date** : May 21, 2015

**Authors** : W M A D B Fernando, Ian J Martins, K G Goozee, Charles S Brennan, V Jayasena, R N Martins

**Study Type** : Review

**Additional Links**

**Substances** : [Coconut](#) : CK(404) : AC(75) , [Coconut Oil](#) : CK(177) : AC(38)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Dyslipidemias](#) : CK(389) : AC(74) , [Hypertension](#) : CK(2843) : AC(395) , [Insulin Resistance](#) : CK(1656) : AC(340)

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## Coconut Water (AC 1) (CK 2)

### Young coconut juice could significantly reduce some pathologies associated with Alzheimer's disease.

**Pubmed Data** : Br J Nutr. 2011 Mar ;105(5):738-46. Epub 2010 Nov 30. PMID: [21114897](#)

**Article Published Date** : Mar 01, 2011

**Authors** : Nisaudah Radenahmad, Farid Saleh, Kitja Sawangjaroen, Uraporn Vongvatcharanon, Patchara Subhadhirasakul, Wilart Rundorn, Boonsirm Withyachumnarnkul, James R Connor

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Coconut Water](#) : CK(50) : AC(16)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Estrogen Deficiency](#) : CK(57) : AC(19) , [Postmenopausal Disorders](#) : CK(319) : AC(41) , [Postmenopausal Disorders: Memory Impairment](#) : CK(25) : AC(11)

**Additional Keywords** : [Ovariectomy-Induced Changes](#) : CK(80) : AC(37)

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## Codonopsis pilosula (AC 1) (CK 1)

### Codonopsis pilosula exhibits neuritogenic activity.

**Pubmed Data** : Neonatology. 2007;91(3):174-9. Epub 2006 Nov 29. PMID: [12956941](#)

**Article Published Date** : Jan 01, 2007

**Authors** : Jian-Hui Liu, Yong-Ming Bao, Ji-Jun Song, Li-Jia An

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Codonopsis pilosula](#) : CK(23) : AC(4)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Neurologic Disorders](#) : CK(65) : AC(29)

**Pharmacological Actions** : [Antiproliferative](#) : CK(2462) : AC(1674) , [Neuritogenic](#) : CK(133) : AC(59)

**Additional Keywords** : [Drug-Plant-Vitamin Synergies](#) : CK(965) : AC(266)

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# Coenzyme Q10 (AC 12) (CK 63)

## Coenzyme Q10 appears to slow the progressive deterioration of function in Parkinson disease.

**Pubmed Data** : Arch Neurol. 2002 Oct;59(10):1541-50. PMID: [12374491](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Clifford W Shults, David Oakes, Karl Kieburtz, M Flint Beal, Richard Haas, Sandy Plumb, Jorge L Juncos, John Nutt, Ira Shoulson, Julie Carter, Katie Kompoliti, Joel S Perlmutter, Stephen Reich, Matthew Stern, Ray L Watts, Roger Kurlan, Eric Molho, Madaline Harrison, Mark Lew,

**Study Type** : Human Study

### Additional Links

**Substances** : [Coenzyme Q10](#) : CK(941) : AC(140)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631)

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## Coenzyme Q10 demonstrated significant therapeutic effects in transgenic mouse model of ALS and Huntington's disease.

**Pubmed Data** : Free Radic Res. 2002 Apr;36(4):455-60. PMID: [12069110](#)

**Article Published Date** : Apr 01, 2002

**Authors** : M Flint Beal

**Study Type** : Transgenic Animal Study

### Additional Links

**Substances** : [Coenzyme Q10](#) : CK(941) : AC(140)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Huntington Disease](#) : CK(84) : AC(32) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

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## Coenzyme Q10 has a neuroprotective effect in an experimental model of Parkinson's disease.

**Pubmed Data** : J Neurochem. 2008 Mar;104(6):1613-21. Epub 2007 Oct 31. PMID: [17973981](#)

**Article Published Date** : Mar 01, 2008

**Authors** : Carine Cleren, Lichuan Yang, Beverly Lorenzo, Noel Y Calingasan, Andrew Schomer, Anthony Sireci, Elizabeth J Wille, M Flint Beal

**Study Type** : Animal Study

### Additional Links

**Substances** : [Coenzyme Q10](#) : CK(941) : AC(140) , [Ubiquinol](#) : CK(138) : AC(24)

**Diseases :** [Parkinson's Disease : CK\(525\) : AC\(163\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## Coenzyme Q10 has therapeutic value as demonstrated in a transgenic animal model of Alzheimer's disease.

**Pubmed Data :** [J Alzheimers Dis. 2011 Jul 28. Epub 2011 Jul 28. PMID: 21799249](#)

**Article Published Date :** Jul 28, 2011

**Authors :** Magali Dumont, Khatuna Kipiani, Fangmin Yu, Elizabeth Wille, Maya Katz, Noel Y Calingasan, Gunnar K Gouras, Michael T Lin, M Flint Beal

**Study Type :** Transgenic Animal Study

### Additional Links

**Substances :** [Coenzyme Q10 : CK\(941\) : AC\(140\)](#)

**Diseases :** [Alzheimer's Disease : CK\(1282\) : AC\(375\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## Coenzyme Q10 levels as high as 3,000 mg a day are safe and well-tolerated in ALS patients.

**Pubmed Data :** [Neurology. 2005 Dec 13;65\(11\):1834-6. PMID: 16344537](#)

**Article Published Date :** Dec 13, 2005

**Authors :** K L Ferrante, J Shefner, H Zhang, R Betensky, M O'Brien, H Yu, M Fantasia, J Taft, M F Beal, B Traynor, K Newhall, P Donofrio, J Caress, C Ashburn, B Freiberg, C O'Neill, C Paladenech, T Walker, A Pestronk, B Abrams, J Florence, R Renna, J Schierbecker, B Malkus, M Cudkowicz

**Study Type :** Human Study

### Additional Links

**Substances :** [Coenzyme Q10 : CK\(941\) : AC\(140\)](#)

**Diseases :** [Amyotrophic Lateral Sclerosis : CK\(567\) : AC\(140\)](#)

**Pharmacological Actions :** [Antioxidants : CK\(7192\) : AC\(2631\)](#), [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#)

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## Coenzyme Q10 may contribute to the pathophysiology of Parkinson's disease.

**Pubmed Data :** [Neurosci Lett. 2008 Dec 5;447\(1\):17-9. Epub 2008 Sep 30. PMID: 18840506](#)

**Article Published Date :** Dec 05, 2008

**Authors :** Iain P Hargreaves, Amelia Lane, Patrick M A Sleiman

**Study Type :** Human Study

### Additional Links

**Substances :** [Coenzyme Q10 : CK\(941\) : AC\(140\)](#)

**Diseases :** [Parkinson's Disease : CK\(526\) : AC\(164\)](#)

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## Coenzyme Q10 prevents paraquat-induced oxidative stress, neuronal loss in substantia nigra region and parkinsonism in adult rats.

**Pubmed Data** : BMC Neurosci. 2009;10:88. Epub 2009 Jul 27. PMID: [19635141](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Mallika Somayajulu-Nițu, Jagdeep K Sandhu, Jerome Cohen, Marianna Sikorska, T S Sridhar, Anca Matei, Henryk Borowy-Borowski, Siyaram Pandey

**Study Type** : Animal Study

### Additional Links

**Substances** : [Coenzyme Q10](#) : CK(941) : AC(140)

**Diseases** : [Oxidative Stress](#) : CK(3800) : AC(1357), [Parkinson's Disease](#) : CK(525) : AC(163), [Parkinsonian Disorders](#) : CK(15) : AC(4)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Coenzyme Q10 reduces beta-amyloid plaque in an APP/PS1 transgenic mouse model of Alzheimer's disease.

**Pubmed Data** : J Mol Neurosci. 2010 May;41(1):110-3. Epub 2009 Oct 16. PMID: [19834824](#)

**Article Published Date** : May 01, 2010

**Authors** : Xifei Yang, George Dai, Geng Li, Edward S Yang

**Study Type** : Animal Study

### Additional Links

**Substances** : [Coenzyme Q10](#) : CK(941) : AC(140)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Coenzyme Q10 supplementation provides mild symptomatic benefit in patients with Parkinson's disease.

**Pubmed Data** : Neurosci Lett. 2003 May 8;341(3):201-4. PMID: [12697283](#)

**Article Published Date** : May 08, 2003

**Authors** : Thomas Müller, Thomas Büttner, Ali Farshad Gholipour, Wilfried Kuhn

**Study Type** : Human Study

### Additional Links

**Substances** : [Coenzyme Q10](#) : CK(941) : AC(140)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Combination therapy using CoQ(10) and creatine may be useful in the treatment of neurodegenerative diseases

## such as Parkinson's disease and Huntington Disease.

**Pubmed Data** : J Neurochem. 2009 Jun;109(5):1427-39. Epub 2009 Mar 28. PMID: [19476553](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Lichuan Yang, Noel Y Calingasan, Elizabeth J Wille, Kerry Cormier, Karen Smith, Robert J Ferrante, M Flint Beal

**Study Type** : Animal Study

### Additional Links

**Substances** : [Coenzyme Q10](#) : CK(941) : AC(140) , [Creatine](#) : CK(137) : AC(25)

**Diseases** : [Huntington Disease](#) : CK(84) : AC(32) , [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Natural Substance Synergy](#) : CK(534) : AC(244)

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## Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : Clin Nutr. 2009 Dec;28(6):604-17. Epub 2009 Sep 25. PMID: [19782443](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Barkha P Patel, Mazen J Hamadeh

**Study Type** : Commentary

### Additional Links

**Substances** : [Alpha-Lipoic Acid](#) : CK(462) : AC(106) , [Carnitine](#) : CK(434) : AC(66) , [Coenzyme Q10](#) : CK(941) : AC(140) , [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312) , [Folic Acid](#) : CK(643) : AC(93) , [Ginkgo biloba](#) : CK(796) : AC(161) , [Melatonin](#) : CK(946) : AC(304) , [Red Wine Extract](#) : CK(114) : AC(32) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## There is increased mitochondrial oxidative damage in patients with sporadic amyotrophic lateral sclerosis

**Pubmed Data** : J Neurol Sci. 2008 Apr 15;267(1-2):66-9. Epub 2007 Oct 24. PMID: [17961597](#)

**Article Published Date** : Apr 15, 2008

**Authors** : Takahiko Murata, Chigumi Ohtsuka, Yasuo Terayama

**Study Type** : Human Study

### Additional Links

**Substances** : [Coenzyme Q10](#) : CK(941) : AC(140)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Mitochondrial Diseases](#) : CK(224) : AC(90) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2285) : AC(299)

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## Coffee (AC 7) (CK 16)

### A compound in coffee protects human dopaminergic neurons from 6-hydroxydopamine-derived oxidative stress.

**Pubmed Data** : FEBS Lett. 2008 Jul 23;582(17):2655-62. Epub 2008 Jun 30. PMID: [18593583](#)

**Article Published Date** : Jul 23, 2008

**Authors** : Yong Pil Hwang, Hye Gwang Jeong

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Coffee](#) : CK(746) : AC(99)

**Diseases** : [Oxidative Stress](#) : CK(3800) : AC(1357), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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### Caffeine in coffee can prevent and help brain function in Alzheimer's Disease

**Pubmed Data** : Curr Neuropharmacol. 2009 Sep ;7(3):207-16. PMID: [20190962](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Anisur Rahman

**Study Type** : Human Study, Review, Transgenic Animal Study

**Additional Links**

**Substances** : [Caffeine](#) : CK(177) : AC(30), [Coffee](#) : CK(786) : AC(101)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

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### Coffee and caffeine chronologically enhanced the antiamyloidogenic activity of melatonin through suppression of A $\beta$ oligomerization.

**Pubmed Data** : Drug Des Devel Ther. 2015 ;9:241-72. Epub 2014 Dec 24. PMID: [25565776](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Li-Fang Zhang, Zhi-Wei Zhou, Zhen-Hai Wang, Yan-Hui Du, Zhi-Xu He, Chuanhai Cao, Shu-Feng Zhou

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Caffeine](#) : CK(177) : AC(30), [Coffee](#) : CK(746) : AC(99), [Melatonin](#) : CK(946) : AC(304)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235)

: AC(1052), Nrf2 activation : CK(172) : AC(83)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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## Coffee contains a compound called trigonelline which promotes neurite outgrowth.

**Pubmed Data** : Biol Pharm Bull. 1999 Jul;22(7):679-82. PMID: [10443461](#)

**Article Published Date** : Jul 01, 1999

**Authors** : C Tohda, N Nakamura, K Komatsu, M Hattori

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Coffee : CK(786) : AC(101), Trigonelline : CK(6) : AC(4)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59)

**Additional Keywords** : Trigonelline : CK(1) : AC(1)

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## Coffee contains polyphenols that attenuate oxidative neuronal cell death.

**Pubmed Data** : J Pharm Pharmacol. 1999 Nov;51(11):1313-9. PMID: [19028509](#)

**Article Published Date** : Nov 01, 1999

**Authors** : Eun Sun Cho, Young Jin Jang, Mun Kyung Hwang, Nam Joo Kang, Ki Won Lee, Hyong Joo Lee

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Coffee : CK(746) : AC(99)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Quercetin is the major neuroprotective component in coffee against Parkinson's disease and Alzheimer's disease.

**Pubmed Data** : Neurobiol Aging. 2016 Jul 5 ;46:113-123. Epub 2016 Jul 5. PMID: [27479153](#)

**Article Published Date** : Jul 04, 2016

**Authors** : Moonhee Lee, Edith G McGeer, Patrick L McGeer

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Coffee : CK(787) : AC(102), Quercetin : CK(557) : AC(246)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Roasted coffee is much higher in the neuroprotective lipophilic antioxidants than green coffee.

**Pubmed Data** : J Agric Food Chem. 2009 Sep 22. Epub 2009 Sep 22. PMID: [19772322](#)

**Article Published Date** : Sep 22, 2009

**Authors** : Yi-Fang Chu, Peter H Brown, Barbara J Lyle, Yumin Chen, Richard M Black, Claire E Williams, Yi-Ching Lin, Chih-Wei Hsu, Irene H Cheng

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Coffee](#) : CK(786) : AC(101), [Coffee: Green/Unroasted](#) : CK(50) : AC(6)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

## Coffee: Green/Unroasted (AC 1) (CK 1)

### Roasted coffee is much higher in the neuroprotective lipophilic antioxidants than green coffee.

**Pubmed Data** : J Agric Food Chem. 2009 Sep 22. Epub 2009 Sep 22. PMID: [19772322](#)

**Article Published Date** : Sep 22, 2009

**Authors** : Yi-Fang Chu, Peter H Brown, Barbara J Lyle, Yumin Chen, Richard M Black, Claire E Williams, Yi-Ching Lin, Chih-Wei Hsu, Irene H Cheng

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Coffee](#) : CK(786) : AC(101), [Coffee: Green/Unroasted](#) : CK(50) : AC(6)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

## Colostrum (AC 1) (CK 1)

**Colostrinin, a polypeptide isolated from sheep's colostrum, may play a preventive role in Alzheimer disease pathogenesis.**

**Pubmed Data** : J Nutr Health Aging. 2009 Jun;13(6):522-7. PMID: [19536420](#)

**Article Published Date** : Jun 01, 2009

**Authors** : D Douraghi-Zadeh, B Matharu, A Razvi, B Austen

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Colostrum : CK(59) : AC(11)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Copper (AC 2) (CK 11)

### Copper deficiency may be implicated in Alzheimer's disease.

**Pubmed Data** : Med Hypotheses. 2008;70(4):802-7. Epub 2007 Oct 24. PMID: [17928161](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Leslie M Klevay

**Study Type** : Commentary

**Additional Links**

**Substances** : Copper : CK(83) : AC(17)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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### Selenium, glutathione, copper/zinc and superoxide dismutase may have therapeutic value in ALS.

**Pubmed Data** : Scand J Rheumatol. 1995;24(2):85-93. PMID: [9726810](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Apostolski, Z Marinković, A Nikolić, D Blagojević, M B Spasić, A M Michelson

**Study Type** : Human Study

**Additional Links**

**Substances** : Antioxidant formulas : CK(492) : AC(76), Copper : CK(83) : AC(17), Glutathione : CK(61) : AC(16), Selenium : CK(784) : AC(139), Superoxide dismutase : CK(16) : AC(5), Zinc : CK(941) : AC(139)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Calcium Channel Blockers : CK(87) : AC(23)

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# Cordyceps Militaris (AC 1) (CK 1)

## Cordycepin protects PC12 cells against 6-OHDA-induced neurotoxicity.

**Pubmed Data** : Biomed Pharmacother. 2016 Jul ;81:7-14. Epub 2016 Apr 6. PMID: [27261571](#)

**Article Published Date** : Jun 30, 2016

**Authors** : Opeyemi J Olatunji, Yan Feng, Oyenike O Olatunji, Jian Tang, Zhen Ouyang, Zhaoliang Su

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Cordyceps Militaris](#) : CK(32) : AC(22)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Malondialdehyde Down-regulation](#) : CK(537) : AC(143), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

# Coriander (AC 1) (CK 1)

## Nutraceuticals derived from such spices as turmeric, red pepper, black pepper, licorice, clove, ginger, garlic, coriander, and cinnamon target inflammatory pathways, thereby preventing neurodegenerative diseases.

**Pubmed Data** : Mol Neurobiol. 2011 Oct ;44(2):142-59. Epub 2011 Mar 1. PMID: [21360003](#)

**Article Published Date** : Oct 01, 2011

**Authors** : Ramaswamy Kannappan, Subash Chandra Gupta, Ji Hye Kim, Simone Reuter, Bharat Bhushan Aggarwal

**Study Type** : Review

**Additional Links**

**Substances** : [Black Pepper](#) : CK(229) : AC(96), [Cinnamon](#) : CK(243) : AC(88), [Clove](#) : CK(104) : AC(55), [Coriander](#) : CK(1) : AC(1), [Garlic](#) : CK(712) : AC(225), [Ginger](#) : CK(676) : AC(175), [Licorice](#) : CK(345) : AC(110), [Red Pepper](#) : CK(4) : AC(2)

**Diseases** : [Inflammation](#) : CK(2863) : AC(839), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

## Creatine (AC 3) (CK 5)

**Combination therapy using CoQ(10) and creatine may be useful in the treatment of neurodegenerative diseases such as Parkinson's disease and Huntington Disease.**

**Pubmed Data** : J Neurochem. 2009 Jun;109(5):1427-39. Epub 2009 Mar 28. PMID: [19476553](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Lichuan Yang, Noel Y Calingasan, Elizabeth J Wille, Kerry Cormier, Karen Smith, Robert J Ferrante, M Flint Beal

**Study Type** : Animal Study

**Additional Links**

**Substances** : Coenzyme Q10 : CK(941) : AC(140) , Creatine : CK(137) : AC(25)

**Diseases** : Huntington Disease : CK(84) : AC(32) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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**Creatine in mouse models of neurodegeneration and aging.**

**Pubmed Data** : Amino Acids. 2011 May ;40(5):1297-303. Epub 2011 Mar 10. PMID: [21390530](#)

**Article Published Date** : Apr 30, 2011

**Authors** : T Klopstock, M Elstner, A Bender

**Study Type** : Animal Study

**Additional Links**

**Substances** : Creatine : CK(137) : AC(25)

**Diseases** : Aging : CK(1591) : AC(429) , Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140) , Neurodegenerative Diseases : CK(3370) : AC(846)

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**Creatine may play a neuroprotective role in treating neurodegenerative disorders such as Huntington's disease.**

**Pubmed Data** : Neuromolecular Med. 2008;10(4):275-90. Epub 2008 Nov 13. PMID: [19005780](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Peter J Adhietty, M Flint Beal

**Study Type** : Commentary

#### Additional Links

**Substances** : [Creatine](#) : CK(137) : AC(25)

**Diseases** : [Huntington Disease](#) : CK(84) : AC(32) , [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

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## Crocin (AC 2) (CK 4)

**Crocin inhibits beta amyloid induced apoptosis, which is possibly associated with its antioxidant properties.**

**Pubmed Data** : [Pharmacol Biochem Behav. 2015 Dec ;139\(Pt A\):47-58. Epub 2015 Oct 17. PMID: 26484504](#)

**Article Published Date** : Nov 30, 2015

**Authors** : Farideh Asadi, Amir Hossein Jamshidi, Fariba Khodagholi, Asal Yans, Leila Azimi, Mehrdad Faizi, Leila Vali, Mohammad Abdollahi, Mohammad Hossein Ghahremani, Mohammad Sharifzadeh

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Crocin](#) : CK(58) : AC(34)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**Saffron may be exploited as a supplementary therapeutic agent in PD and other oxidative stress mediated neurodegenerative conditions.**

**Pubmed Data** : [Neurotoxicology. 2015 Dec 17 ;52:230-242. Epub 2015 Dec 17. PMID: 26705857](#)

**Article Published Date** : Dec 16, 2015

**Authors** : Sriranjini Venkat Rao, Muralidhara, Sarat Chandra Yeniseti, Padmanabhan S Rajini

**Study Type** : Insect Study

#### Additional Links

**Substances** : [Crocin](#) : CK(58) : AC(34) , [Saffron](#) : CK(255) : AC(63)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Oxidative Stress](#) : CK(3800) : AC(1357) , [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Cucurbitacin E (AC 1) (CK 1)

### Cucurbitacin E decreases neuronal death and autophagic flux in a postmitotic cellular model of Parkinson's disease.

**Pubmed Data** : Oxid Med Cell Longev. 2014 ;2014:425496. Epub 2014 Dec 9. PMID: [25574337](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Anne-Marie Arel-Dubeau, Fanny Longpré, Julie Bournival, Cindy Tremblay, Julie Demers-Lamarche, Pavlina Haskova, Everaldo Attard, Marc Germain, Maria-Grazia Martinoli

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Cucurbitacin E](#) : CK(14) : AC(13)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

## Cumin (AC 1) (CK 1)

### These results show that cuminaldehyde can modulate alpha-synuclein fibrillation.

**Pubmed Data** : J Food Sci. 2015 Oct ;80(10):H2336-45. Epub 2015 Sep 9. PMID: [26351865](#)

**Article Published Date** : Sep 30, 2015

**Authors** : Dina Morshedi, Farhang Aliakbari, Amir Tayaranian-Marvian, Afshin Fassihi, Francisco Pan-Montojo, Horacio Pérez-Sánchez

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Cumin](#) : CK(55) : AC(32)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Essential Oils](#) : CK(175) : AC(64)

# Curcumin (AC 93) (CK 162)

## "Curcumin protects against intracellular amyloid toxicity in rat primary neurons."

**Pubmed Data** : Int J Clin Exp Med. 2012 ;5(1):44-9. Epub 2012 Jan 15. PMID: [22328947](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Jelina Ye, Yan Zhang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Amyloid toxicity : CK(3) : AC(2), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## "Curcumin: A Potential Neuroprotective Agent in Parkinson's Disease."

**Pubmed Data** : Curr Pharm Des. 2012 Jan 1. Epub 2012 Jan 1. PMID: [22211691](#)

**Article Published Date** : Jan 01, 2012

**Authors** : R B Mythri, Mm Srinivas Bharath

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## A combination of nutrients improves cognitive functioning while decreasing Alzheimer disease neuropathology in an animal model.

**Pubmed Data** : PLoS One. 2010;5(11):e14015. Epub 2010 Nov 17. PMID: [21103342](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Anna Parachikova, Kim N Green, Curt Hendrix, Frank M LaFerla

**Study Type** : Animal Study

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), B-complex : CK(268) : AC(31), Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Piperine : CK(114) : AC(60), Vitamin C : CK(1953) : AC(401)

**Diseases :** [Alzheimer's Disease : CK\(1282\) : AC\(375\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## A curcumin metabolite protects against Alzheimer disease associated amyloid $\beta$ -induced toxicity.

**Pubmed Data :** [Neuroreport. 2010 Nov 24. Epub 2010 Nov 24. PMID: 21116204](#)

**Article Published Date :** Nov 24, 2010

**Authors :** Shilpa Mishra, Mamata Mishra, Pankaj Seth, Shiv Kumar Sharma

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Curcumin : CK\(4128\) : AC\(2171\)](#)

**Diseases :** [Alzheimer's Disease : CK\(1282\) : AC\(375\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## A novel demethylated curcuminoid exhibits neuroprotective and anti-inflammatory properties.

**Pubmed Data :** [Antioxid Redox Signal. 2009 Mar;11\(3\):449-68. PMID: 18724833](#)

**Article Published Date :** Mar 01, 2009

**Authors :** Savita Khanna, Han-A Park, Chandan K Sen, Trimurtulu Golakoti, Krishanu Sengupta, Somepalli Venkateswarlu, Sashwati Roy

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Curcumin : CK\(4128\) : AC\(2171\)](#)

**Diseases :** [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#)

**Pharmacological Actions :** [Anti-Inflammatory Agents : CK\(4499\) : AC\(1573\)](#), [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#)

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## Both curcumin and its metabolite tetrahydrocurcumin exert neuroprotection against chemically-induced neurotoxicity.

**Pubmed Data :** [Inflammopharmacology. 2008 Apr;16\(2\):96-9. PMID: 18408903](#)

**Article Published Date :** Apr 01, 2008

**Authors :** A Rajeswari, M Sabesan

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Curcumin : CK\(4128\) : AC\(2171\)](#), [Flavonoids : CK\(1194\) : AC\(376\)](#), [Polyphenols : CK\(920\) : AC\(333\)](#), [Tetrahydrocurcumin : CK\(66\) : AC\(30\)](#)

**Diseases :** [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#), [Parkinson's Disease : CK\(525\) : AC\(163\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## Curcumin (from Turmeric) reduces amyloid beta plaque formation in an animal model of Alzheimers disease.

**Pubmed Data** : Neurochem Int. 2009 Mar-Apr;54(3-4):199-204. Epub 2008 Nov 30. PMID: [15590663](#)

**Article Published Date** : Mar 01, 2009

**Authors** : Fusheng Yang, Giselle P Lim, Aynun N Begum, Oliver J Ubeda, Mychica R Simmons, Surendra S Ambegaokar, Pingping P Chen, Rakez Kaye, Charles G Glabe, Sally A Frautschy, Gregory M Cole

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## Curcumin (from Turmeric) reduces oxidative damage and amyloid plaque in a transgenic animal model of Alzheimers.

**Pubmed Data** : J Neurosci. 2001 Nov 1;21(21):8370-7. PMID: [11606625](#)

**Article Published Date** : Nov 01, 2001

**Authors** : G P Lim, T Chu, F Yang, W Beech, S A Frautschy, G M Cole

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## Curcumin ameliorates cognitive deficits and neurodegeneration in a rat model of sporadic dementia of Alzheimer's type (SDAT).

**Pubmed Data** : Eur Neuropsychopharmacol. 2009 Sep;19(9):636-47. Epub 2009 Mar 28. PMID: [19329286](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Tauheed Ishrat, Md Nasrul Hoda, M Badruzzaman Khan, Seema Yousuf, Muzamil Ahmad, Mohd Moshahid Khan, Ajmal Ahmad, Fakhrul Islam

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin and Apigenin might delay the onset of Alzheimer's disease or slow down its progression.

**Pubmed Data** : Neural Regen Res. 2015 Aug ;10(8):1181-5. PMID: [26487830](#)

**Article Published Date** : Jul 31, 2015

**Authors** : Madhuri Venigalla, Erika Gyengesi, Gerald Münch

**Study Type** : Review

**Additional Links**

**Substances** : Apigenin : CK(158) : AC(101), Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin and naringenin exhibit neuroprotective properties in an animal model of Parkinson's disease.

**Pubmed Data** : Free Radic Res. 2005 Oct;39(10):1119-25. PMID: [16298737](#)

**Article Published Date** : Oct 01, 2005

**Authors** : Virginia Zbarsky, Krishna P Datla, Shabnam Parkar, Deepal K Rai, Okezie I Aruoma, David T Dexter

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Naringenin : CK(53) : AC(37)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin and rosemary have anti-Alzheimer's activity.

**Pubmed Data** : J Neurosci Res. 2004 Mar 15;75(6):742-50. PMID: [14994335](#)

**Article Published Date** : Mar 15, 2004

**Authors** : Kenjiro Ono, Kazuhiro Hasegawa, Hironobu Naiki, Masahito Yamada

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Rosemary : CK(216) : AC(77)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Pharmacological Actions** : Platelet Aggregation Inhibitors : CK(186) : AC(40)

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## Curcumin appears to enhance clearance of amyloid-beta in Alzheimer's disease patients.

**Pubmed Data** : J Alzheimers Dis. 2006 Sep;10(1):1-7. PMID: [16988474](#)

**Article Published Date** : Sep 01, 2006

**Authors** : Laura Zhang, Milan Fiala, John Cashman, James Sayre, Araceli Espinosa, Michelle Mahanian, Justin Zaghi, Vladimir Badmaev, Michael C Graves, George Bernard, Mark Rosenthal

**Study Type** : Human Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Additional Keywords** : [Disease Regression](#) : CK(150) : AC(26)

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## Curcumin attenuated neurodegeneration in this animal model Alzheimer's disease.

**Pubmed Data** : J Alzheimers Dis. 2016 Apr 5. Epub 2016 Apr 5. PMID: [27060945](#)

**Article Published Date** : Apr 04, 2016

**Authors** : Han-Chang Huang, Bo-Wen Zheng, Yu Guo, Jian Zhao, Jiang-Yan Zhao, Xiao-Wei Ma, Zhao-Feng Jiang

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Oxidative Stress](#) : CK(3799) : AC(1356)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Curcumin attenuates amyloid- $\beta$ aggregate toxicity and modulates amyloid- $\beta$ aggregation pathway.

**Pubmed Data** : ACS Chem Neurosci. 2015 Nov 17. Epub 2015 Nov 17. PMID: [26529184](#)

**Article Published Date** : Nov 16, 2015

**Authors** : Arjun Thapa, Stephen D Jett, Eva Y Chi

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin attenuates the kainic acid-induced hippocampal cell death in the mice.

**Pubmed Data** : Carcinogenesis. 2009 Nov;30(11):1949-56. Epub 2009 Sep 30. PMID: [17300872](#)

**Article Published Date** : Nov 01, 2009

**Authors** : Hyun Joo Shin, Ji Yeong Lee, Eunyung Son, Dong Hun Lee, Hyun Joon Kim, Sang Soo Kang, Gyeong Jae Cho, Wan Sung Choi, Gu Seob Roh

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Brain Injury: Hippocampal Damage : CK(39) : AC(18), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3799) : AC(1356)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Enzyme Inhibitors : CK(463) : AC(250), Excitatory Amino Acid Agonists : CK(7) : AC(4) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin binding to A $\beta$ shifts the equilibrium in the aggregation pathway by promoting the formation of non-toxic aggregates.

**Pubmed Data** : Chem Biol Drug Des. 2015 Mar 16. Epub 2015 Mar 16. PMID: [25776887](#)

**Article Published Date** : Mar 15, 2015

**Authors** : Praveen P N Rao, Tarek Mohamed, Karan Teckwani, Gary Tin

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin decreases amyloid-beta peptide levels by attenuating the maturation of amyloid-beta precursor protein.

**Pubmed Data** : Gastroenterology. 2006 Jan;130(1):120-6. PMID: [20622013](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Can Zhang, Andrew Browne, Daniel Child, Rudolph E Tanzi

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin demonstrates therapeutic properties in an animal model of Alzheimer disease.

**Pubmed Data** : J Pharmacol Exp Ther. 2008 Jul;326(1):196-208. Epub 2008 Apr 16. PMID: [18417733](#)

**Article Published Date** : Jul 01, 2008

**Authors** : Aynun N Begum, Mychica R Jones, Giselle P Lim, Takashi Morihara, Peter Kim, Dennis D Heath, Cheryl L Rock, Mila A Pruitt, Fusheng Yang, Beverly Hudspeth, Shuxin Hu, Kym F Faull, Bruce Teter, Greg M Cole, Sally A Frautschy

**Study Type :** Animal Study

**Additional Links**

**Substances :** Curcumin : CK(4128) : AC(2171)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375) , Inflammation : CK(2863) : AC(839)

**Pharmacological Actions :** Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin exerts neuroprotective effects against homocysteine intracerebroventricular injection-induced cognitive impairment and oxidative stress in rat brain.

**Pubmed Data :** Exp Neurol. 2010 Oct;225(2):237-9. Epub 2010 Jul 11. PMID: [20553189](#)

**Article Published Date :** Oct 01, 2010

**Authors :** Amin Ataie, Masoumeh Sabetkasaei, Abbas Haghparast, Akbar Hajizadeh Moghaddam, Ramin Ataee, Shiva Nasiraei Moghaddam

**Study Type :** Animal Study

**Additional Links**

**Substances :** Curcumin : CK(4128) : AC(2171)

**Diseases :** Homocysteine: Elevated : CK(431) : AC(63) , Learning disorders : CK(188) : AC(50) , Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions :** Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin exhibits a neuroprotective effect through the classical wnt signaling pathway.

**Pubmed Data :** J Surg Res. 2014 Dec ;192(2):298-304. Epub 2014 Jun 19. PMID: [25033705](#)

**Article Published Date :** Nov 30, 2014

**Authors :** Fei Chen, Haoxiang Wang, Xin Xiang, Jichao Yuan, Weihua Chu, Xingsen Xue, Haitao Zhu, Hongfei Ge, Mingming Zou, Hua Feng, Jiangkai Lin

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Curcumin : CK(4128) : AC(2171)

**Diseases :** Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053) , Wnt/ $\beta$ -catenin signaling pathway modulation : CK(34) : AC(23)

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## Curcumin exhibits inhibitory effects on Alzheimer disease associated $\beta$ -amyloid proteins.

**Pubmed Data :** Int Dent J. 1996 Feb;46(1):22-34. PMID: [20727383](#)

**Article Published Date :** Feb 01, 1996

**Authors :** Hongying Liu, Zhong Li, Donghai Qiu, Qiong Gu, Qingfeng Lei, Li Mao

**Study Type :** In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin has a neuroprotective effect against homocysteine-induced cognitive impairment and oxidative stress in the rat.

**Pubmed Data** : Pharmacol Biochem Behav. 2010 Oct;96(4):378-85. Epub 2010 Jul 6. PMID: [20619287](#)

**Article Published Date** : Oct 01, 2010

**Authors** : Amin Ataie, Masoumeh Sabetkasaei, Abbas Haghparast, Akbar Hajizadeh Moghaddam, Behrang Kazeminejad

**Study Type** : Animal Study

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Homocysteine: Elevated : CK(431) : AC(63), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3799) : AC(1356)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin has a protective effect against against intracerebral streptozotocin induced impairment in memory and cerebral blood flow.

**Pubmed Data** : Life Sci. 2010 Jan 16;86(3-4):87-94. Epub 2009 Nov 17. PMID: [19925811](#)

**Article Published Date** : Jan 16, 2010

**Authors** : Himani Awasthi, Santoshkumar Tota, Kashif Hanif, Chandiswar Nath, Rakesh Shukla

**Study Type** : Animal Study

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Dementia : CK(571) : AC(79), Memory Disorders : CK(340) : AC(103), Memory Disorders: Drug-Induced : CK(99) : AC(25), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin has a protective effect against neuronal damage associated with metal ions.

**Pubmed Data** : Neurosci Lett. 2008 Aug 8;440(3):344-7. Epub 2008 May 24. PMID: [18583042](#)

**Article Published Date** : Aug 08, 2008

**Authors** : Raozhou Lin, Xiaohong Chen, Wenming Li, Yifan Han, Peiqing Liu, Rongbiao Pi

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Heavy Metal Toxicity : CK(903) : AC(285) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Enzyme Inhibitors : CK(463) : AC(250) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin has anti-aging and neuroprotective effects in aged rat brain regions.

**Pubmed Data** : Biogerontology. 2006 Apr;7(2):81-9. PMID: [16802111](#)

**Article Published Date** : Apr 01, 2006

**Authors** : Kiran Bala, B C Tripathy, Deepak Sharma

**Study Type** : Animal Study

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Aging : CK(1581) : AC(428) , Aging: Brain : CK(246) : AC(84) , Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Enzyme Inhibitors : CK(463) : AC(250) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin has anti-apoptotic properties in a transgenic amyotrophic lateral sclerosis mice.

**Pubmed Data** : J Neurochem. 2005 Jun ;93(5):1087-98. PMID: [15934930](#)

**Article Published Date** : May 31, 2005

**Authors** : Hoon Ryu, Karen Smith, Sandra I Camelo, Isabel Carreras, Junghee Lee, Antonio H Iglesias, Fernando Dangond, Kerry A Cormier, Merit E Cudkowicz, Robert H Brown, Robert J Ferrante

**Study Type** : Animal Study

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201) , Bcl-2 protein down-regulation : CK(198) : AC(131) , NF-kappaB Inhibitor : CK(1102) : AC(687)

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## Curcumin has beneficial effects in experimental dementia.

**Pubmed Data** : Naunyn Schmiedebergs Arch Pharmacol. 2010 Jun;381(6):529-39. Epub 2010 Apr 6. PMID: [20369229](#)

**Article Published Date** : Jun 01, 2010

**Authors** : Puneet Rinwa, Baljinder Kaur, Amteshwar Singh Jaggi, Nirmal Singh

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Curcumin](#) : CK(4128) : AC(2171)

**Diseases :** [Dementia](#) : CK(571) : AC(79) , [Memory Disorders](#) : CK(340) : AC(103) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Curcumin has neuroprotective properties against NMDA-induced toxicity.

**Pubmed Data :** Invest Ophthalmol Vis Sci. 2010 Sep 22. Epub 2010 Sep 22. PMID: [20861489](#)

**Article Published Date :** Sep 22, 2010

**Authors :** Andrea Matteucci, Roberta Cammarota, Silvia Paradisi, Monica Varano, Maria Balduzzi, Lanfranco Leo, Gian C Bellenchi, Chiara De Nuccio, Giovanna Carnovale-Scalzo, Giovanni Scoria, Claudio Frank, Cinzia Mallozzi, Annamaria M Di Stasi, Sergio Visentin, Fiorella Malchiodi-Albedi

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Curcumin](#) : CK(4128) : AC(2171)

**Diseases :** [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin has neuroprotective properties.

**Pubmed Data :** Prog Neuropsychopharmacol Biol Psychiatry. 2010 Feb 1;34(1):147-53. Epub 2009 Oct 29. PMID: [19879308](#)

**Article Published Date :** Feb 01, 2010

**Authors :** Rui Wang, Yu-Hua Li, Ying Xu, Ying-Bo Li, Hong-Li Wu, Hao Guo, Jian-Zhao Zhang, Jing-Jie Zhang, Xue-Yang Pan, Xue-Jun Li

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Curcumin](#) : CK(4128) : AC(2171)

**Diseases :** [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Enzyme Inhibitors](#) : CK(463) : AC(250) , [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin improves learning and memory ability in a mouse Alzheimer's disease experimental model.

**Pubmed Data :** Chin Med J (Engl). 2008 May 5;121(9):832-9. PMID: [18701050](#)

**Article Published Date :** May 05, 2008

**Authors :** Rui Pan, Sheng Qiu, Da-xiang Lu, Jun Dong

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Memory Disorders : CK(340) : AC(103) , Memory Loss : CK(153) : AC(40)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin improves the tau-induced neuronal dysfunction that is independent of insoluble aggregates of tau.

**Pubmed Data** : Neurobiol Aging. 2016 Mar ;39:69-81. Epub 2015 Dec 1. PMID: [26923403](#)

**Article Published Date** : Feb 29, 2016

**Authors** : Tomohiro Miyasaka, Ce Xie, Satomi Yoshimura, Yuki Shinzaki, Sawako Yoshina, Eriko Kage-Nakadai, Shohei Mitani, Yasuo Ihara

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin induces neurogenesis and neuroprotection and may provide a novel therapeutic agent for both regenerative medicine and for the treatment of neurodegenerative diseases.

**Pubmed Data** : Folia Neuropathol. 2015 ;53(2):89-99. PMID: [26216111](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Ryszard Pluta, Anna Bogucka-Kocka, Marzena Ułamek-Kozioł, Wanda Furmaga-Jabłońska, Sławomir Januszewski, Judyta Brzozowska, Mirosław Jabłoński, Janusz Kocki

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846) , Stroke: Ischemic : CK(182) : AC(25)

**Pharmacological Actions** : Neurogenesis : CK(59) : AC(30) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin inhibition of JNKs prevents dopaminergic neuronal loss in a mouse model of Parkinson's disease through suppressing mitochondria dysfunction.

**Pubmed Data** : Transl Neurodegener. 2012 ;1(1):16. Epub 2012 Aug 20. PMID: [23210631](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Jing Pan, Hui Li, Jian-Fang Ma, Yu-Yan Tan, Qin Xiao, Jian-Qing Ding, Sheng-Di Chen

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin inhibits A $\beta$ -induced neuronal damage and cell death involving the prevention from intracellular Ca<sup>2+</sup> elevation mediated by the NMDA receptor.

**Pubmed Data** : J Recept Signal Transduct Res. 2015 Jun 8;1-8. Epub 2015 Jun 8. PMID: [26053510](#)

**Article Published Date** : Jun 07, 2015

**Authors** : Han-Chang Huang, Ping Chang, Shu-Yan Lu, Bo-Wen Zheng, Zhao-Feng Jiang

**Study Type** : Human In Vitro

#### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400)

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## Curcumin inhibits amyloid-petptide induced changes associated with the progression of Alzheimer's disease.

**Pubmed Data** : J Neurochem. 2004 Dec;91(5):1199-210. PMID: [15569263](#)

**Article Published Date** : Dec 01, 2004

**Authors** : Ranjit K Giri, Vikram Rajagopal, Vijay K Kalra

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Enzyme Inhibitors](#) : CK(463) : AC(250) , [Epidermal growth factor receptor \(EGFR\) inhibitor](#) : CK(65) : AC(41) , [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin inhibits appoptosin induced apoptosis in SH-SY5Y cells by upregulating the expression of HO-1.

**Pubmed Data** : Acta Pharmacol Sin. 2015 May ;36(5):544-52. Epub 2015 Apr 20. PMID: [25891083](#)

**Article Published Date** : Apr 30, 2015

**Authors** : Kun-mu Zheng, Jing Zhang, Cui-lin Zhang, Yun-wu Zhang, Xiao-chun Chen

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Pharmacological Actions :** Anti-Apoptotic : CK(360) : AC(201), Heme oxygenase-1 up-regulation : CK(69) : AC(38)

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## Curcumin inhibits the conversion of prion protein in vitro.

**Pubmed Data :** J Neurochem. 2008 Mar ;104(6):1553-64. Epub 2007 Nov 7. PMID: [17996023](#)

**Article Published Date :** Feb 29, 2008

**Authors :** Iva Hafner-Bratkovic, Jernej Gaspersic, Lojze M Smid, Mara Bresjanac, Roman Jerala

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Curcumin : CK(4128) : AC(2171)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375), Creutzfeldt-Jakob disease : CK(27) : AC(9), Prion Diseases : CK(10) : AC(7)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin is a potential therapy for diseases where the deleterious effects of oxidative stress are due to aberrant Ca<sup>2+</sup> entry mediated by TRPM2 channels.

**Pubmed Data :** Redox Biol. 2015 Nov 10 ;7:1-7. Epub 2015 Nov 10. PMID: [26609559](#)

**Article Published Date :** Nov 09, 2015

**Authors :** E Kheradpezhrouh, G J Barritt, G Y Rychkov

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Curcumin : CK(4128) : AC(2171)

**Diseases :** Liver Damage : CK(867) : AC(324), Liver Damage: Drug-Induced : CK(91) : AC(25), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3799) : AC(1356)

**Pharmacological Actions :** Hepatoprotective : CK(1342) : AC(581), Transient Receptor Potential Melastatin 2 Inhibition : CK(1) : AC(1)

**Problem Substances :** Acetaminophen : CK(83) : AC(29), Paracetamol : CK(119) : AC(35)

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## Curcumin loaded lactoferrin nanoparticles could be a promising drug delivery strategy against neurotoxicity in dopaminergic neurons.

**Pubmed Data :** Neurochem Int. 2016 Jan 27. Epub 2016 Jan 27. PMID: [26826319](#)

**Article Published Date :** Jan 26, 2016

**Authors :** V Satish Bollimpelli, Prashant Kumar, Sonali Kumari, Anand K Kondapi

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Curcumin : CK(4128) : AC(2171)

**Diseases :** Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

## Curcumin may be a potential therapeutic agent that can regulate the critical molecules in brain insulin signalling pathways.

**Pubmed Data** : Int J Immunopathol Pharmacol. 2016 Jul 27. Epub 2016 Jul 27. PMID: [27466310](#)

**Article Published Date** : Jul 26, 2016

**Authors** : Hui-Li Feng, Hui-Zi Dang, Hui Fan, Xiao-Pei Chen, Ying-Xue Rao, Ying Ren, Jin-Duo Yang, Jing Shi, Peng-Wen Wang, Jin-Zhou Tian

**Study Type** : Transgenic Animal Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin may be a promising pharmacological candidate for neurodegenerative diseases.

**Pubmed Data** : PLoS One. 2016 ;11(1):e0147721. Epub 2016 Jan 29. PMID: [26824354](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Gen-Lin He, Zhen Luo, Ju Yang, Ting-Ting Shen, Yi Chen, Xue-Sen Yang

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573) , [Prostaglandin PGE2 downregulation](#) : CK(96) : AC(46)

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## Curcumin may be effective in preventing or slowing the progression of Parkinson's Disease.

**Pubmed Data** : J Toxicol Pathol. 2015 Oct ;28(4):197-206. Epub 2015 Jul 27. PMID: [26538809](#)

**Article Published Date** : Sep 30, 2015

**Authors** : Xi-Jun He, Kazuyuki Uchida, Chiaki Megumi, Nobuaki Tsuge, Hiroyuki Nakayama

**Study Type** : Animal Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin may have therapeutic value in Alzheimer disease prevention.

**Pubmed Data** : Cancer Lett. 2009 Nov 24. Epub 2009 Nov 24. PMID: [11755008](#)

**Article Published Date** : Nov 24, 2009

**Authors** : S A Frautschy, W Hu, P Kim, S A Miller, T Chu, M E Harris-White, G M Cole

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Curcumin may have therapeutic value in Alzheimer disease.

**Pubmed Data** : Brain Res. 2010 Nov 18;1361:115-23. Epub 2010 Sep 16. PMID: [20840842](#)

**Article Published Date** : Nov 18, 2010

**Authors** : Zijian Xiao, Liming Lin, Zhonghua Liu, Fengtao Ji, Weiyan Shao, Minjuan Wang, Ling Liu, Shengliang Li, Feng Li, Xianzhang Bu

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin may play a protective effect in primary cultured rat prefrontal cortical neurons against iAbeta-induced cytotoxicity.

**Pubmed Data** : Neurosci Lett. 2010 Aug 9;480(1):21-4. PMID: [20638958](#)

**Article Published Date** : Aug 09, 2010

**Authors** : Xiao-Yan Qin, Yong Cheng, Long-Chuan Yu

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062), [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin may protect against amyloid-beta-stimulated

## inflammation associated with Alzheimer disease.

**Pubmed Data** : J Alzheimers Dis. 2010;20(4):1189-99. PMID: [20413894](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Hong-Mei Wang, Yan-Xin Zhao, Shi Zhang, Gui-Dong Liu, Wen-Yan Kang, Hui-Dong Tang, Jian-Qing Ding, Sheng-Di Chen

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Brain Inflammation](#) : CK(246) : AC(140), [Inflammation](#) : CK(2862) : AC(838)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573), [Cyclooxygenase 2 Inhibitors](#) : CK(448) : AC(267), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Curcumin micelles might be a suitable formulation for the prevention of mitochondrial dysfunction in brain aging and neurodegeneration.

**Pubmed Data** : Neurochem Int. 2015 Aug 5. Epub 2015 Aug 5. PMID: [26254982](#)

**Article Published Date** : Aug 04, 2015

**Authors** : Stephanie Hagl, Alexa Kocher, Christina Schiborr, Natalie Kolesova, Jan Frank, Gunter P Eckert

**Study Type** : Animal Study, In Vitro Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Mitochondrial Dysfunction](#) : CK(224) : AC(90), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin nanoparticles may offer a therapeutic approach to treating neurodegenerative diseases by enhancing brain self-repair mechanisms.

**Pubmed Data** : ACS Nano. 2014 Jan 28 ;8(1):76-103. Epub 2013 Dec 10. PMID: [24467380](#)

**Article Published Date** : Jan 27, 2014

**Authors** : Shashi Kant Tiwari, Swati Agarwal, Brashket Seth, Anuradha Yadav, Saumya Nair, Priyanka Bhatnagar, Madhumita Karmakar, Manisha Kumari, Lalit Kumar Singh Chauhan, Devendra Kumar Patel, Vikas Srivastava, Dharendra Singh, Shailendra Kumar Gupta, Anurag Tripathi, Rajnish Kumar Chaturvedi, Kailash Chand Gupta

**Study Type** : Animal Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neurogenesis](#) : CK(59) : AC(30), [Neuroprotective Agents](#) : CK(2237) :

## Curcumin prevents dopaminergic neuronal death.

**Pubmed Data** : Rejuvenation Res. 2010 Feb;13(1):55-64. PMID: [20230279](#)

**Article Published Date** : Feb 01, 2010

**Authors** : Song Yu, Wei Zheng, Na Xin, Zhi-Hong Chi, Nai-Qian Wang, Ying-Xue Nie, Wan-Yu Feng, Zhan-You Wang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin protects 6-hydroxydopamine (6-OHDA)-induced neuronal death associated with Parkinson disease.

**Pubmed Data** : Biochem Pharmacol. 2009 Jul 15;78(2):178-83. Epub 2009 Apr 8. PMID: [19464433](#)

**Article Published Date** : Jul 15, 2009

**Authors** : Jun Wang, Xi-Xun Du, Hong Jiang, Jun-Xia Xie

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Oxidative Stress : CK(3799) : AC(1356) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Apoptotic : CK(2941) : AC(2062) , Neuroprotective Agents : CK(2235) : AC(1052) , NF-kappaB Inhibitor : CK(1100) : AC(686)

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## Curcumin protects against beta-amyloid-induced toxicity.

**Pubmed Data** : Food Chem Toxicol. 2008 Aug;46(8):2881-7. Epub 2008 Jun 4. PMID: [18573304](#)

**Article Published Date** : Aug 01, 2008

**Authors** : So-Young Park, Hyo-Shin Kim, Eun-Kyung Cho, Bo-Youn Kwon, Sohee Phark, Kwang-Woo Hwang, Donggeun Sul

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , DNA damage : CK(969) : AC(377) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin protects against chemically induced cell death.

**Pubmed Data** : Apoptosis. 2006 Jun;11(6):943-53. PMID: [16547587](#)

**Article Published Date** : Jun 01, 2006

**Authors** : J Chen, X Q Tang, J L Zhi, Y Cui, H M Yu, E H Tang, S N Sun, J Q Feng, P X Chen

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062), [Enzyme Inhibitors](#) : CK(463) : AC(250)

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## Curcumin protects against lead neurotoxicity in rats.

**Pubmed Data** : Hum Exp Toxicol. 2003 Dec;22(12):653-8. PMID: [14992327](#)

**Article Published Date** : Dec 01, 2003

**Authors** : Pradeep K Shukla, Vinay K Khanna, Mohd Y Khan, Rikhab C Srimal

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Lead Poisoning](#) : CK(201) : AC(58), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Curcumin protects astrocytes from induced oxidative stress, and reverses mitochondrial damage and dysfunction induced by oxidative stress.

**Pubmed Data** : Neuroscience. 2016 Jul 13. Epub 2016 Jul 13. PMID: [27423629](#)

**Article Published Date** : Jul 12, 2016

**Authors** : Amita Davey, Sandeep K Agrawal

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Mitochondrial Dysfunction](#) : CK(224) : AC(90), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3799) : AC(1356)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201), [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573), [Antioxidants](#) : CK(7191) : AC(2630), [Cytoprotective](#) : CK(176) : AC(87), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [Regenerative](#) : CK(52) : AC(28)

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## Curcumin protects dopaminergic cells from Parkinson disease-associated 6-hydroxydopamine-induced neurotoxicity.

**Pubmed Data** : Neurosci Lett. 2011 Feb 11;489(3):192-6. Epub 2010 Dec 15. PMID: [21167259](#)

**Article Published Date** : Feb 11, 2011

**Authors** : Yamaratee Jaisin, Anusorn Thampithak, Benjawan Meesarapee, Piyanee Ratanachamnong, Apichart Suksamrarn, Laddawal Phivthong-Ngam, Noppawan Phumala-Morales, Sukumal Chongthammakun, Piyarat Govitrapong, Yupin Sanvarinda

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin protects dopaminergic neuron against lipopolysaccharide induced neurotoxicity.

**Pubmed Data** : Neurochem Res. 2008 Oct;33(10):2044-53. Epub 2008 Mar 27. PMID: [18368483](#)

**Article Published Date** : Oct 01, 2008

**Authors** : Sufen Yang, Dan Zhang, Zhengqin Yang, Xiaoming Hu, Steven Qian, Jie Liu, Belinda Wilson, Michelle Block, Jau-Shyong Hong

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Brain: Microglial Activation](#) : CK(82) : AC(53), [Lipopolysaccharide-Induced Toxicity](#) : CK(357) : AC(216), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573), [Interleukin-1 beta downregulation](#) : CK(452) : AC(199), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [NF-kappaB Inhibitor](#) : CK(1100) : AC(686), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1752) : AC(641)

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## Curcumin protects the brain against drug-induced neurotoxicity, indicating it may have value in preventing neurological disorders such as Parkinson disease.

**Pubmed Data** : Antioxid Redox Signal. 2007 Mar;9(3):399-408. PMID: [17184173](#)

**Article Published Date** : Mar 01, 2007

**Authors** : Rajeswara Babu Mythri, Balusamy Jagatha, Nityananda Pradhan, Julie Andersen, M M Srinivas Bharath

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Mitochondrial Dysfunction](#) : CK(224) : AC(90), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Enzyme Inhibitors](#) : CK(463) : AC(250), [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumin reduces alpha-synuclein induced cytotoxicity in Parkinson's disease cell model.

**Pubmed Data** : BMC Neurosci. 2010;11:57. Epub 2010 Apr 30. PMID: [20433710](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Min S Wang, Shanta Boddapati, Sharareh Emadi, Michael R Sierks

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Oxidative Stress : CK(3800) : AC(1357), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Apoptotic : CK(2941) : AC(2062), Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin reverses amyloid pathology and associated neurotoxicity in a mouse model of Alzheimer disease.

**Pubmed Data** : J Neurochem. 2007 Aug;102(4):1095-104. Epub 2007 Apr 30. PMID: [17472706](#)

**Article Published Date** : Aug 01, 2007

**Authors** : M Garcia-Alloza, L A Borrelli, A Rozkalne, B T Hyman, B J Bacskai

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Additional Keywords** : Disease Reversal : CK(65) : AC(17)

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## Curcumin strongly induced modulator effects on oxidative stress, intracellular Ca<sup>2+</sup> levels, and the caspase-3 and -9 values in an experimental oxidative stress model.

**Pubmed Data** : J Recept Signal Transduct Res. 2015 Nov 25:1-7. Epub 2015 Nov 25. PMID: [26608462](#)

**Article Published Date** : Nov 24, 2015

**Authors** : Abdülhadi Cihangir Uğuz, Ahmi Öz, Mustafa Nazıroğlu

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Oxidative Stress : CK(3799) : AC(1356), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin supplementation could ameliorate cognitive deficits and reverse biochemical alterations in a ICV-

## streptozotocin Alzheimer's rat model.

**Pubmed Data** : Eur J Pharmacol. 2016 Jan 5 ;770:52-60. Epub 2015 Dec 2. PMID: [26638997](#)

**Article Published Date** : Jan 04, 2016

**Authors** : Doaa M Samy, Cherine A Ismail, Rasha A Nassra, Teshreen M Zeitoun, Azhar M Nomair

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain: Oxidative Stress : CK(75) : AC(44) , Diabetes Mellitus: Type 2 : CK(3344) : AC(592)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin suppresses ERK1/2 and p38 signaling, thus, attenuating inflammatory responses of brain microglia.

**Pubmed Data** : Neurosci Lett. 2015 May 6 ;594:105-10. Epub 2015 Mar 25. PMID: [25818332](#)

**Article Published Date** : May 05, 2015

**Authors** : Xiaolei Shi, Zhenyang Zheng, Jie Li, Zijian Xiao, Weiwei Qi, Aiwu Zhang, Qi Wu, Yannan Fang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Interleukin-1 beta downregulation : CK(452) : AC(199) , Interleukin-6 Downregulation : CK(1078) : AC(337) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Dose Response : CK(1035) : AC(400)

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## Curcumin treatment alleviates the effects of glutathione depletion in vitro and in vivo, indicating its value for Parkinson disease.

**Pubmed Data** : Free Radic Biol Med. 2008 Mar 1;44(5):907-17. Epub 2007 Dec 4. PMID: [18166164](#)

**Article Published Date** : Mar 01, 2008

**Authors** : Balusamy Jagatha, Rajeswara Babu Mythri, Shireen Vali, M M Srinivas Bharath

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Oxidative Stress : CK(3800) : AC(1357) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antineoplastic Agents : CK(1158) : AC(639) , Glutathione Upregulation : CK(152) : AC(53) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin treatment improves motor behavior in $\alpha$ -synuclein transgenic mice.

**Pubmed Data** : PLoS One. 2015 ;10(6):e0128510. Epub 2015 Jun 2. PMID: [26035833](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Kateri J Spinelli, Valerie R Osterberg, Charles K Meshul, Amala Soumyanath, Vivek K Unni

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Curcumin was able to significantly ameliorate ROT induced dopaminergic neuronal oxidative damage in the SNpc of rats.

**Pubmed Data** : Mol Med Rep. 2015 Dec 8. Epub 2015 Dec 8. PMID: [26648392](#)

**Article Published Date** : Dec 07, 2015

**Authors** : Qunli Cui, Xin Li, Hongcan Zhu

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Brain: Oxidative Stress : CK(75) : AC(44) , Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Curcumin's higher binding affinity for iron and copper rather than zinc may contribute to its protective effect in Alzheimer's disease.

**Pubmed Data** : J Alzheimers Dis. 2004 Aug;6(4):367-77; discussion 443-9. PMID: [15345806](#)

**Article Published Date** : Aug 01, 2004

**Authors** : Larry Baum, Alex Ng

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171) , Zinc : CK(941) : AC(139)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## Curcumin's neuroprotective properties may be due to its

## anticholinesterase, antioxidant activity and brain insulin receptor modulating activities.

**Pubmed Data** : Pharmacol Res. 2010 Mar;61(3):247-52. Epub 2009 Dec 21. PMID: [20026275](#)

**Article Published Date** : Mar 01, 2010

**Authors** : Rahul Agrawal, Bhanvi Mishra, Ethika Tyagi, Chandishwar Nath, Rakesh Shukla

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Dementia](#) : CK(571) : AC(79), [Memory Disorders](#) : CK(340) : AC(103)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Cholinesterase Inhibitors](#) : CK(5) : AC(4), [Insulin Receptor Modulator](#) : CK(12) : AC(2)

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## Curcuminoids enhance memory in an amyloid-infused rat model of Alzheimer's disease.

**Pubmed Data** : Neuroscience. 2010 Sep 1;169(3):1296-306. Epub 2010 Jun 9. PMID: [20538041](#)

**Article Published Date** : Sep 01, 2010

**Authors** : T Ahmed, S A Enam, A H Gilani

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Memory Disorders](#) : CK(340) : AC(103)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcuminoids protect against neuronal cell death in an Alzheimer disease model.

**Pubmed Data** : Neurosci Lett. 2001 Apr 27;303(1):57-61. PMID: [11297823](#)

**Article Published Date** : Apr 27, 2001

**Authors** : D S Kim, S Y Park, J K Kim

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Curcuminoids rescue long-term potentiation impaired by amyloid peptide in rat hippocampal slices.

**Pubmed Data** : Synapse. 2010 Oct 20. Epub 2010 Oct 20. PMID: [20963814](#)

**Article Published Date** : Oct 20, 2010

**Authors** : Touqeer Ahmed, Anwarul-Hassan Gilani, Narges Hosseinmardi, Saeed Semnanian, Syed Ather Enam, Yaghoub Fathollahi

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Brain Injury: Hippocampal Damage](#) : CK(39) : AC(18)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Curcumins promote monocytic gene expression related to $\beta$ -amyloid and superoxide dismutase clearance.

**Pubmed Data** : Neurodegener Dis. 2012 ;10(1-4):274-6. Epub 2011 Dec 7. PMID: [22156608](#)

**Article Published Date** : Dec 31, 2011

**Authors** : J R Cashman, S Gagliardi, M Lanier, S Ghirmai, K J Abel, M Fiala

**Study Type** : Review

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

**Problem Substances** : [Non-Steroidal Anti-Inflammatory Drugs \(NSAIDs\)](#) : CK(1843) : AC(209)

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## Curry consumption improves cognitive function in the elderly.

**Pubmed Data** : Am J Epidemiol. 2006 Nov 1;164(9):898-906. Epub 2006 Jul 26. PMID: [16870699](#)

**Article Published Date** : Nov 01, 2006

**Authors** : Tze-Pin Ng, Peak-Chiang Chiam, Theresa Lee, Hong-Choon Chua, Leslie Lim, Ee-Heok Kua

**Study Type** : Human Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171), [Curry Spice](#) : CK(13) : AC(3)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Dietary curcumin ameliorates aging-related cerebrovascular dysfunction through the AMPK/uncoupling protein 2 pathway.

**Pubmed Data** : Cell Physiol Biochem. 2013 ;32(5):1167-77. Epub 2013 Nov 11. PMID: [24335167](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Yunfei Pu, Hexuan Zhang, Peijian Wang, Yu Zhao, Qiang Li, Xing Wei, Yuanting Cui, Jing Sun, Qianhui Shang, Daoyan Liu, Zhiming Zhu

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Brain Inflammation](#) : CK(246) : AC(140), [Cerebrovascular Disorders](#) : CK(10) : AC(1), [Ischemia](#) : CK(70) : AC(34), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3799) : AC(1356), [Stroke](#) : CK(1322) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [Neurorestorative](#) : CK(71) : AC(21)

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## Discovery of natural compounds as nonpeptidyl inhibitors is a significant transition towards feasible drug development for neurodegenerative disorders.

**Pubmed Data** : Biomed Res Int. 2015 ;2015:379817. Epub 2015 May 4. PMID: [26064904](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Saif Khan, Khurshid Ahmad, Eyad M A Alshammari, Mohd Adnan, Mohd Hassan Baig, Mohtashim Lohani, Pallavi Somvanshi, Shafiul Haque

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171), [Rosmarinic acid](#) : CK(21) : AC(11)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376), [Amyotrophic lateral sclerosis \(ALS\)](#) : CK(566) : AC(140), [Huntington Disease](#) : CK(84) : AC(32), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Nonpeptidyl Inhibitors](#) : CK(1) : AC(1)

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## EGCG and curcumin suppress Alzheimer disease associated beta amyloid production.

**Pubmed Data** : Am J Physiol Heart Circ Physiol. 2005 Aug;289(2):H715-21. Epub 2005 Mar 18. PMID: [18695518](#)

**Article Published Date** : Aug 01, 2005

**Authors** : Yoshiari Shimmyo, Takeshi Kihara, Akinori Akaike, Tetsuhiro Niidome, Hachiro Sugimoto

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Catechin](#) : CK(512) : AC(169), [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Oxidative Stress](#) : CK(3799) : AC(1356)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Enzyme Inhibitors](#) : CK(463) : AC(250), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Extracts enriched in polyphenols showed promising

## neuroprotective effects.

**Pubmed Data** : Curr Top Med Chem. 2016 Feb 4. Epub 2016 Feb 4. PMID: [26845551](#)

**Article Published Date** : Feb 03, 2016

**Authors** : Carmela Spagnuolo, Marianna Napolitano, Idolo Tedesco, Stefania Moccia, Alfonsina Milito, Gian Luigi Russo

**Study Type** : Review

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171), [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312), [Elderberry](#) : CK(84) : AC(18), [Polyphenols](#) : CK(920) : AC(333), [Quercetin](#) : CK(557) : AC(246), [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Brain Inflammation](#) : CK(246) : AC(140), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Grape seed polyphenols and curcumin reduce genomic instability events in a transgenic mouse model for Alzheimer's disease.

**Pubmed Data** : Mutat Res. 2009 Feb 10;661(1-2):25-34. Epub 2008 Nov 6. PMID: [19027755](#)

**Article Published Date** : Feb 10, 2009

**Authors** : Philip Thomas, Yan-Jiang Wang, Jin-Hua Zhong, Shantha Kosaraju, Nathan J O'Callaghan, Xin-Fu Zhou, Michael Fenech

**Study Type** : Animal Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171), [Flavonoids](#) : CK(1194) : AC(376), [Grapefruit Seed Extract](#) : CK(37) : AC(14), [Polyphenols](#) : CK(920) : AC(333)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Genoprotective](#) : CK(259) : AC(95), [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## NPs-Cur enhance the action of curcumin on several pathways implicated in the pathophysiology of Alzheimer's disease.

**Pubmed Data** : Mol Pharm. 2015 Dec 23. Epub 2015 Dec 23. PMID: [26618861](#)

**Article Published Date** : Dec 22, 2015

**Authors** : Ghislain Djiokeng Paka, Sihem Doggui, Ahlem Zaghmi, Ramia Safar, Lé Dao, Andreas Reisch, Andrey Klymchenko, V Gaëlle Roullin, Olivier Joubert, Charles Ramassamy

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Phosphatidylserine and curcumin can ameliorate scopolamine-induced amnesia and may be useful treatments for Alzheimer's disease.

**Pubmed Data** : Behav Pharmacol. 2016 Jul 6. Epub 2016 Jul 6. PMID: [27388114](#)

**Article Published Date** : Jul 05, 2016

**Authors** : Teresa A Barber, Edward M Edris, Paul J Levinsky, Justin M Williams, Ari R Brouwer, Shawn A Gessay

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Phosphatidylserine : CK(134) : AC(20)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amnesia: Drug-Induced : CK(13) : AC(8)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Polyphenol antioxidants have properties to treat neurodegenerative diseases.

**Pubmed Data** : Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type** : Review

**Additional Links**

**Substances** : Allicin : CK(48) : AC(25), Carnosic Acid : CK(21) : AC(16), Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Isothiocyanate : CK(15) : AC(4), Quercetin : CK(557) : AC(246), Resveratrol : CK(1232) : AC(737), Rosmarinic acid : CK(21) : AC(11), Sulforaphane : CK(533) : AC(262)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Polyphenols such as curcumin and EGCG from green tea may chelate out iron from the Alzheimers brain.

**Pubmed Data** : Prog Neurobiol. 2007 Aug;82(6):348-60. Epub 2007 Jun 19. PMID: [17659826](#)

**Article Published Date** : Aug 01, 2007

**Authors** : Silvia Mandel, Tamar Amit, Orit Bar-Am, Moussa B H Youdim

**Study Type** : Commentary

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312),

Green Tea : CK(1934) : AC(549) , Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Iron Overload : CK(31) : AC(17)

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## Review: Curcumin has a number of potential therapeutic properties for Alzheimer diseases.

**Pubmed Data** : Mutat Res. 2009 Oct 13. Epub 2009 Oct 13. PMID: [19966973](#)

**Article Published Date** : Oct 13, 2009

**Authors** : Shrikant Mishra, Kalpana Palanivelu

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## The current review provides an updated overview of the metabolism and mechanism of action of curcumin in various organ pathophysiologies.

**Pubmed Data** : Food Chem Toxicol. 2015 Jun 9 ;83:111-124. Epub 2015 Jun 9. PMID: [26066364](#)

**Article Published Date** : Jun 08, 2015

**Authors** : Shatadal Ghosh, Sharmistha Banerjee, Parames C Sil

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Diabetes Mellitus: Type 2 : CK(3344) : AC(592) , Inflammation : CK(2862) : AC(838) , Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3799) : AC(1356)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630)

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## The present review discusses the mitochondrial restorative mechanisms of these bioenergetics and antioxidants as a potential alternative drug strategy for effective management of AD.

**Pubmed Data** : Front Pharmacol. 2015 ;6:206. Epub 2015 Sep 24. PMID: [26441662](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Anil Kumar, Arti Singh

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171) , Ginkgo biloba : CK(796) : AC(161) , Omega-3 Fatty Acids : CK(3268) : AC(387)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Mitochondrial Dysfunction : CK(224) : AC(90), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## The present review is designed to look into epigenetic mechanisms that could be induced with curcumin during stroke.

**Pubmed Data** : Metab Brain Dis. 2015 Apr ;30(2):427-35. Epub 2014 May 1. PMID: [24788895](#)

**Article Published Date** : Mar 31, 2015

**Authors** : Anuradha Kalani, Pradip K Kamat, Komal Kalani, Neetu Tyagi

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846) , Stroke : CK(1322) : AC(163) , Stroke: Attenuation/Recovery : CK(345) : AC(74)

**Additional Keywords** : Epigenetic Modification : CK(218) : AC(88)

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## This review summarizes recent findings on the protective roles of redox nanoparticles both in vitro and in vivo.

**Pubmed Data** : Curr Drug Metab. 2016 ;17(2):142-9. PMID: [26806041](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Magisetty Obulesu, Magisetty Jhansilakshmi

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## This review summarizes the current knowledge on the effect of curcumin in the treatment and prevention of inflammation, neurodegenerative diseases and cancers.

**Pubmed Data** : Curr Pharmacol Rep. 2015 Apr ;1(2):129-139. Epub 2015 Jan 30. PMID: [26457241](#)

**Article Published Date** : Mar 31, 2015

**Authors** : Sarandeep S S Boyanapalli, Ah-Ng Tony Kong

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Cancers: All : CK(14296) : AC(4541) , Inflammation : CK(2862) : AC(838) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Chemopreventive : CK(2678) : AC(767), Histone deacetylase inhibitor : CK(48) : AC(37), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Epigenetic Modification : CK(218) : AC(88)

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**This review will provide an overview of the antioxidant, anti-inflammatory, anti-amyloidogenic, neuroprotective, and cognition-enhancing effects of a variety of nutraceuticals.**

**Pubmed Data** : Neurochem Int. 2015 Oct 31. Epub 2015 Oct 31. PMID: [26529297](#)

**Article Published Date** : Oct 30, 2015

**Authors** : Madhuri Venigalla, Erika Gyengesi, Matthew J Sharman, Gerald Münch

**Study Type** : Review

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), Apigenin : CK(158) : AC(101), Curcumin : CK(4128) : AC(2171), DHA (Docosahexaenoic Acid) : CK(783) : AC(129), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Resveratrol : CK(1232) : AC(737)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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**This reviews the neuroprotective roles of these herbs and summarizes their anti-inflammatory, antioxidant, and anti-apoptotic effects in PD.**

**Pubmed Data** : Am J Transl Res. 2015 ;7(7):1189-202. Epub 2015 Jul 15. PMID: [26328004](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Wenyu Fu, Wenxin Zhuang, Shuanhu Zhou, Xin Wang

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Ginsenosides : CK(69) : AC(28), Resveratrol : CK(1232) : AC(737)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

---

**Turmeric contains compounds which have potent anti-amyloidogenic effects indicating their value for Alzheimer disease.**

**Pubmed Data** : Curr Alzheimer Res. 2009 Dec;6(6):564-71. PMID: [19715544](#)

**Article Published Date** : Dec 01, 2009

**Authors** : R Douglas Shytle, Paula C Bickford, Kavon Rezai-zadeh, L Hou, Jin Zeng, Jun Tan, Paul R Sanberg, Cyndy D Sanberg, Bill Roschek, Ryan C Fink, Randall S Alberte

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Turmeric extract exhibits anti-Alzheimer properties.

**Pubmed Data** : Curr Alzheimer Res. 2011 Aug 30. Epub 2011 Aug 30. PMID: [21875408](#)

**Article Published Date** : Aug 30, 2011

**Authors** : R Douglas Shytle, J Tan, P C Bickford, K Rezai-Zadeh, L Hou, J Zeng, P R Sanberg, C D Sanberg, R S Alberte, R C Fink, B Roschek

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Brain: Microglial Activation](#) : CK(82) : AC(53) , [Brain Inflammation](#) : CK(246) : AC(140)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Vitamin D3 and curcuminoids (turmeric) stimulate amyloid-beta clearance by macrophages of Alzheimer's disease patients.

**Pubmed Data** : J Alzheimers Dis. 2009 Jul;17(3):703-17. PMID: [19433889](#)

**Article Published Date** : Jul 01, 2009

**Authors** : Ava Masoumi, Ben Goldenson, Senait Ghirmai, Hripsime Avagyan, Justin Zaghi, Ken Abel, Xueying Zheng, Araceli Espinosa-Jeffrey, Michelle Mahanian, Phillip T Liu, Martin Hewison, Matthew Mizwickie, John Cashman, Milan Fiala

**Study Type** : Human Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171) , [Vitamin D](#) : CK(3113) : AC(441)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Additional Keywords** : [Disease Regression](#) : CK(150) : AC(26)

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## Curry consumption improves cognitive function in the elderly.

**Pubmed Data** : Am J Epidemiol. 2006 Nov 1;164(9):898-906. Epub 2006 Jul 26. PMID: [16870699](#)

**Article Published Date** : Nov 01, 2006

**Authors** : Tze-Pin Ng, Peak-Chiang Chiam, Theresa Lee, Hong-Choon Chua, Leslie Lim, Ee-Heok Kua

**Study Type** : Human Study

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171), [Curry Spice](#) : CK(13) : AC(3)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

## Cyanidin (AC 1) (CK 1)

### A purple rice extract and its major constituent, cyanidin, were successful in protecting from the cytotoxic effect of A $\beta$ 25-35 through attenuation ROS and RNS production.

**Pubmed Data** : Neurotoxicology. 2014 Dec ;45:149-58. Epub 2014 Oct 28. PMID: [25451968](#)

**Article Published Date** : Nov 30, 2014

**Authors** : Sarinthorn Thummayot, Chainarong Tocharus, Decha Pinkaew, Kittikun Viwatpinyo, Korawan Sringarm, Jiraporn Tocharus

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Cyanidin](#) : CK(1) : AC(1), [Rice: Black](#) : CK(24) : AC(15)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400), [Plant Extracts](#) : CK(7288) : AC(2419)

## DHA (Docosahexaenoic Acid) (AC 5)

## (CK 6)

### "Docosahexaenoic Acid (DHA): An Ancient Nutrient for the Modern Human Brain."

**Pubmed Data** : Nutrients. 2011 May ;3(5):529-54. Epub 2011 May 10. PMID: [22254110](#)

**Article Published Date** : May 01, 2011

**Authors** : Joanne Bradbury

**Study Type** : Review

**Additional Links**

**Substances** : DHA (Docosahexaenoic Acid) : CK(783) : AC(129)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3376) : AC(850)

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### A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : Chromium : CK(56) : AC(12), Cinnamon : CK(243) : AC(88), Cocoa : CK(522) : AC(77), DHA (Docosahexaenoic Acid) : CK(783) : AC(129), Fish Oil : CK(701) : AC(111), Folic Acid : CK(643) : AC(93), Genistein : CK(515) : AC(228), Hops : CK(76) : AC(26), Policosanol : CK(194) : AC(25), Sesame Seeds : CK(235) : AC(71), Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Neurodegenerative Diseases : CK(3370) : AC(846)

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### Mice experienced a significant improvements in cognitive function, biochemical and histological indicators of AD after consuming a nutrient mix for up to 7 months.

**Pubmed Data** : PLoS One. 2015;10(11):e0143135. Epub 2015 Nov 25. PMID: [26606074](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Shengyuan Wang, Yu Cu, Chao Wang, Wei Xie, Lan Ma, Jinfeng Zhu, Yan Zhang, Rui Dang, Decai Wang, Yonghui Wu, Qunhong Wu

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Blueberry : CK(258) : AC(89), DHA (Docosahexaenoic Acid) : CK(783) : AC(129), EPA (Eicosapentaenoic Acid) : CK(758) : AC(105)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

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## The omega-3 fatty acid DHA may limit amyloidogenic neurodegenerative diseases such as Alzheimer's disease.

**Pubmed Data :** J Neurochem. 2009 Oct;111(2):568-79. Epub 2009 Aug 17. PMID: [19686246](#)

**Article Published Date :** Oct 01, 2009

**Authors :** Shahdat Hossain, Michio Hashimoto, Masanori Katakura, Koji Miwa, Toshio Shimada, Osamu Shido

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** DHA (Docosahexaenoic Acid) : CK(783) : AC(129)

**Diseases :** Alzheimer's Disease : CK(1283) : AC(376) , Neurodegenerative Diseases : CK(3370) : AC(846)

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## This review will provide an overview of the antioxidant, anti-inflammatory, anti-amyloidogenic, neuroprotective, and cognition-enhancing effects of a variety of nutraceuticals.

**Pubmed Data :** Neurochem Int. 2015 Oct 31. Epub 2015 Oct 31. PMID: [26529297](#)

**Article Published Date :** Oct 30, 2015

**Authors :** Madhuri Venigalla, Erika Gyengesi, Matthew J Sharman, Gerald Münch

**Study Type :** Review

**Additional Links**

**Substances :** Alpha-Lipoic Acid : CK(462) : AC(106) , Apigenin : CK(158) : AC(101) , Curcumin : CK(4128) : AC(2171) , DHA (Docosahexaenoic Acid) : CK(783) : AC(129) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Resveratrol : CK(1232) : AC(737)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

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## Daidzein (AC 1) (CK 1)

**Baicalein and daidzein had a synergistic effect estrogenic and neuroprotective activities in alzheimer's disease and**

## enhanced the effects of different flavonoids.

**Pubmed Data** : Evid Based Complement Alternat Med. 2013 ;2013:635694. Epub 2013 Aug 24.  
PMID: [24058373](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Roy C Y Choi, Judy T T Zhu, Amanda W Y Yung, Pinky S C Lee, Sherry L Xu, Ava J Y Guo, Kevin Y Zhu, Tina T X Dong, Karl W K Tsim

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Baicalein : CK(57) : AC(41), Daidzein : CK(111) : AC(32), Flavonoids : CK(1194) : AC(376)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Alzheimer's Disease : CK(1282) : AC(375),  
Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Estrogen Receptor Agonist : CK(2) : AC(2), Neuroprotective Agents :  
CK(2237) : AC(1053)

**Additional Keywords** : Bioenhancer : CK(8) : AC(5), Natural Substance Synergy : CK(534) : AC(244)

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## Daisy (AC 1) (CK 1)

### A Bellis perennis flavonoid may have potential use in the treatment of neurodegenerative diseases.

**Pubmed Data** : Biol Res. 2013 ;46(3):231-8. PMID: [24346069](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Thiago H Costa Marques, Cassio H Santos De Melo, Rusbene B Fonseca De Carvalho, Luciana M Costa, Alexandre A De Souza, Jorge M David, Juceni P De Lima David, Rivelilson M De Freitas

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Daisy : CK(1) : AC(1)

**Diseases** : Lipid Peroxidation : CK(692) : AC(252), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Delta-tetrahydrocannabinol (THC)

## (AC 3) (CK 14)

### Delta-9-tetrahydrocannabinol appears to be therapeutic for nighttime agitation in severe dementia.

**Pubmed Data** : Psychopharmacology (Berl). 2006 May ;185(4):524-8. Epub 2006 Mar 7. PMID: [16521031](#)

**Article Published Date** : Apr 30, 2006

**Authors** : Sebastian Walther, Richard Mahlberg, Uta Eichmann, Dieter Kunz

**Study Type** : Human Study

**Additional Links**

**Substances** : Delta-tetrahydrocannabinol (THC) : CK(1117) : AC(338)

**Diseases** : Dementia : CK(571) : AC(79), Sleep Disorders : CK(280) : AC(31)

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### THC mediates neuroprotection via PPAR $\gamma$ -dependent restoration of mitochondrial content which may be beneficial for PD treatment.

**Pubmed Data** : Oncotarget. 2016 Jun 27. Epub 2016 Jun 27. PMID: [27366949](#)

**Article Published Date** : Jun 26, 2016

**Authors** : Marie-Louise Zeissler, Jordan Eastwood, Kieran McCorry, C Oliver Hanemann, John P Zajicek, Camille B Carroll

**Study Type** : Animal Study

**Additional Links**

**Substances** : Cannabinoids : CK(705) : AC(276), Delta-tetrahydrocannabinol (THC) : CK(1117) : AC(338)

**Diseases** : Parkinson's Disease : CK(526) : AC(164)

**Pharmacological Actions** : Neuroprotective Agents : CK(2241) : AC(1056)

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### These results support the view of a potential neuroprotective action of cannabinoids against the in vivo and in vitro toxicity of 6-hydroxydopamine.

**Pubmed Data** : Neurobiol Dis. 2005 Jun-Jul;19(1-2):96-107. PMID: [15837565](#)

**Article Published Date** : May 31, 2005

**Authors** : Isabel Lastres-Becker, Francisco Molina-Holgado, José A Ramos, Raphael Mechoulam, Javier Fernández-Ruiz

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Cannabinoids : CK(700) : AC(272), Delta-tetrahydrocannabinol (THC) : CK(1112) : AC(334)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Dopa bean (AC 1) (CK 2)

**A water extract of *Mucuna pruriens* provides long-term amelioration of parkinsonism with reduced risk for dyskinesias.**

**Pubmed Data** : [Parkinsonism Relat Disord.](#) 2010 Aug;16(7):458-65. Epub 2010 May 31. PMID: [20570206](#)

**Article Published Date** : Aug 01, 2010

**Authors** : Christopher A Lieu, Allen R Kunselman, Bala V Manyam, Kala Venkiteswaran, Thyagarajan Subramanian

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Dopa bean](#) : CK(41) : AC(9)

**Diseases** : [Dyskinesia Syndromes](#) : CK(12) : AC(3), [Parkinson's Disease](#) : CK(526) : AC(164), [Parkinsonian Disorders](#) : CK(15) : AC(4)

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## EGCG (Epigallocatechin gallate) (AC 19) (CK 24)

**A combination of nutrients improves cognitive functioning while decreasing Alzheimer disease neuropathology in an animal model.**

**Pubmed Data** : [PLoS One.](#) 2010;5(11):e14015. Epub 2010 Nov 17. PMID: [21103342](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Anna Parachikova, Kim N Green, Curt Hendrix, Frank M LaFerla

**Study Type :** Animal Study

**Additional Links**

**Substances :** Alpha-Lipoic Acid : CK(462) : AC(106) , B-complex : CK(268) : AC(31) , Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Piperine : CK(114) : AC(60), Vitamin C : CK(1953) : AC(401)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

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## EGCG could be a potent remodelling agent of alpha-synuclein aggregates and a potential disease modifying drug for the treatment of PD

**Pubmed Data :** Neurochem Res. 2016 Jun 30. Epub 2016 Jun 30. PMID: [27364962](#)

**Article Published Date :** Jun 29, 2016

**Authors :** Yan Xu, Yanyan Zhang, Zhenzhen Quan, Winnie Wong, Jianping Guo, Rongkai Zhang, Qinghu Yang, Rongji Dai, Patrick L McGeer, Hong Qing

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** EGCG (Epigallocatechin gallate) : CK(606) : AC(312)

**Diseases :** Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords :** Dose Response : CK(1035) : AC(400)

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## EGCG has multifunctional therapeutic effects in the mouse model of ALS

**Pubmed Data :** Neurochem Res. 2006 Oct;31(10):1263-9. Epub 2006 Oct 5. PMID: [17021948](#)

**Article Published Date :** Oct 01, 2006

**Authors :** Zhihao Xu, Sheng Chen, Xuping Li, Guangrui Luo, Liang Li, Weidong Le

**Study Type :** Animal Study

**Additional Links**

**Substances :** EGCG (Epigallocatechin gallate) : CK(606) : AC(312)

**Diseases :** Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## EGCG has neuroprotective abilities in Parkinson's disease.

**Pubmed Data :** Neuromolecular Med. 2016 May 4. Epub 2016 May 4. PMID: [27147525](#)

**Article Published Date :** May 03, 2016

**Authors :** Liting Hang, Adeline Henry Basil, Kah-Leong Lim

**Study Type :** Review

**Additional Links**

**Substances :** EGCG (Epigallocatechin gallate) : CK(606) : AC(312)

**Diseases** : Brain: Oxidative Stress : CK(75) : AC(44) , Inflammation : CK(2863) : AC(839) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## EGCG is a possible therapeutic agent for preventing A $\beta$ -induced inflammatory neurodegeneration.

**Pubmed Data** : Eur J Pharmacol. 2015 Nov 28 ;770:16-24. Epub 2015 Nov 28. PMID: [26643169](#)

**Article Published Date** : Nov 27, 2015

**Authors** : James Cheng-Chung Wei, Hsiu-Chen Huang, Wei-Jen Chen, Chien-Ning Huang, Chiung-Huei Peng, Chih-Li Lin

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : EGCG (Epigallocatechin gallate) : CK(606) : AC(312)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Heme oxygenase-1 up-regulation : CK(69) : AC(38) , Interleukin-1 beta downregulation : CK(452) : AC(199) , Interleukin-6 Downregulation : CK(1078) : AC(337) , Neuroprotective Agents : CK(2235) : AC(1052) , NF-E2-Related Factor-2 (Nrf2) Modulator : CK(45) : AC(24) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

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## EGCG may provide a potential therapeutic candidate for ALS as a disease-modifying agent.

**Pubmed Data** : Biomed Res. 2007 Oct;28(5):261-6. PMID: [16356650](#)

**Article Published Date** : Oct 01, 2007

**Authors** : Seong-Ho Koh, Sang Mok Lee, Hyun Young Kim, Kyu-Yong Lee, Young Joo Lee, Hee-Tae Kim, Juhan Kim, Myung-Ho Kim, Myung Sil Hwang, Chiwon Song, Ki-Wha Yang, Kwang Woo Lee, Seung Hyun Kim, Ok-Hee Kim

**Study Type** : Animal Study

**Additional Links**

**Substances** : EGCG (Epigallocatechin gallate) : CK(606) : AC(312)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## EGCG represents a potent and useful neuroprotective agent for inflammation-mediated neurological disorders.

**Pubmed Data** : J Immunol Res. 2016 ;2016:4962351. Epub 2016 Apr 12. PMID: [27191001](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Jin-Biao Liu, Li Zhou, Yi-Zhong Wang, Xu Wang, Yu Zhou, Wen-Zhe Ho, Jie-Liang Li

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : EGCG (Epigallocatechin gallate) : CK(606) : AC(312)

**Diseases** : Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## EGCG treatment led to a significant decrease in the protein levels of three Alzheimer's disease relevant phospho-tau epitopes.

**Pubmed Data** : Nutr Neurosci. 2015 Jul 24. Epub 2015 Jul 24. PMID: [26207957](#)

**Article Published Date** : Jul 23, 2015

**Authors** : Adrienne S Chesser, Veena Ganeshan, Jonathan Yang, Gail V W Johnson

**Study Type** : Animal Study, In Vitro Study

#### Additional Links

**Substances** : EGCG (Epigallocatechin gallate) : CK(606) : AC(312)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : MicroRNA modulator : CK(260) : AC(142) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Extracts enriched in polyphenols showed promising neuroprotective effects.

**Pubmed Data** : Curr Top Med Chem. 2016 Feb 4. Epub 2016 Feb 4. PMID: [26845551](#)

**Article Published Date** : Feb 03, 2016

**Authors** : Carmela Spagnuolo, Marianna Napolitano, Idolo Tedesco, Stefania Moccia, Alfonsina Milito, Gian Luigi Russo

**Study Type** : Review

#### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Elderberry : CK(84) : AC(18) , Polyphenols : CK(920) : AC(333) , Quercetin : CK(557) : AC(246) , Resveratrol : CK(1232) : AC(737)

**Diseases** : Brain Inflammation : CK(246) : AC(140) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Green tea extracts reversed the striatal oxidative stress and immunohistochemistry alterations in rats.

**Pubmed Data** : Evid Based Complement Alternat Med. 2015 ;2015:161092. Epub 2015 Jun 18. PMID: [26167188](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Natália Bitu Pinto, Bruno da Silva Alexandre, Kelly Rose Tavares Neves, Aline Holanda Silva, Luzia Kalyne A M Leal, Glaucé S B Viana

**Study Type** : Animal Study

**Additional Links**

**Substances** : Catechin : CK(512) : AC(169), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Green Tea : CK(1934) : AC(549)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Long-term drinking of tea may be one of the effective strategies for the deceleration of the progression of degenerative disorders.

**Pubmed Data** : PLoS One. 2016;11(3):e0152064. Epub 2016 Mar 31. PMID: [27030967](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Shuxian Cai, Heng Yang, Kewu Zeng, Jing Zhang, Ni Zhong, Yingzi Wang, Jing Ye, Pengfei Tu, Zhonghua Liu

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Green Tea : CK(1934) : AC(549)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : Clin Nutr. 2009 Dec;28(6):604-17. Epub 2009 Sep 25. PMID: [19782443](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Barkha P Patel, Mazen J Hamadeh

**Study Type** : Commentary

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), Carnitine : CK(434) : AC(66), Coenzyme Q10 : CK(941) : AC(140), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Folic Acid : CK(643) : AC(93), Ginkgo biloba : CK(796) : AC(161), Melatonin : CK(946) : AC(304), Red Wine Extract : CK(114) : AC(32), Vitamin E : CK(1656) : AC(290)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Polyphenol antioxidants have properties to treat neurodegenerative diseases.

**Pubmed Data** : Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type** : Review

**Additional Links**

**Substances** : [Allicin](#) : CK(48) : AC(25) , [Carnosic Acid](#) : CK(21) : AC(16) , [Curcumin](#) : CK(4128) : AC(2171) , [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312) , [Isothiocyanate](#) : CK(15) : AC(4) , [Quercetin](#) : CK(557) : AC(246) , [Resveratrol](#) : CK(1232) : AC(737) , [Rosmarinic acid](#) : CK(21) : AC(11) , [Sulforaphane](#) : CK(533) : AC(262)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Polyphenols such as curcumin and EGCG from green tea may chelate out iron from the Alzheimers brain.

**Pubmed Data** : Prog Neurobiol. 2007 Aug;82(6):348-60. Epub 2007 Jun 19. PMID: [17659826](#)

**Article Published Date** : Aug 01, 2007

**Authors** : Silvia Mandel, Tamar Amit, Orit Bar-Am, Moussa B H Youdim

**Study Type** : Commentary

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171) , [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312) , [Green Tea](#) : CK(1934) : AC(549) , [Polyphenols](#) : CK(920) : AC(333)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Iron Overload](#) : CK(31) : AC(17)

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## The neuroprotective properties of EGCG are associated with its antioxidant, iron chelating and neuritogenic properties.

**Pubmed Data** : Biologics. 2008 Mar;2(1):161-3. PMID: [19756809](#)

**Article Published Date** : Mar 01, 2008

**Authors** : Orly Weinreb, Tamar Amit, Silvia Mandel, Moussa B H Youdim

**Study Type** : Review

**Additional Links**

**Substances** : [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Neurologic Disorders](#) : CK(65) : AC(29)

**Pharmacological Actions** : [Iron Chelating Agents](#) : CK(4) : AC(3) , [Neuritogenic](#) : CK(133) : AC(59) , [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## This review assesses the reliability of the neuroprotective benefits of epigallocatechin-gallate.

**Pubmed Data** : Nutr J. 2016 ;15(1):60. Epub 2016 Jun 7. PMID: [27268025](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Neha Atulkumar Singh, Abul Kalam Azad Mandal, Zaved Ahmed Khan

**Study Type** : Review

**Additional Links**

**Substances** : EGCG (Epigallocatechin gallate) : CK(606) : AC(312)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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**This review collates the current knowledge of tea polyphenols and puts into perspective their potential to be considered as nutraceuticals that target various pathologies in PD.**

**Pubmed Data** : Adv Exp Med Biol. 2015;863:117-137. PMID: [26092629](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Mario Caruana, Neville Vassallo

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Green Tea : CK(1934) : AC(549) , Polyphenols : CK(920) : AC(333) , Tea : CK(1840) : AC(385) , Theaflavins : CK(1) : AC(1)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59) , Neuroprotective Agents : CK(2237) : AC(1053)

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**This review will provide an overview of the antioxidant, anti-inflammatory, anti-amyloidogenic, neuroprotective, and cognition-enhancing effects of a variety of nutraceuticals.**

**Pubmed Data** : Neurochem Int. 2015 Oct 31. Epub 2015 Oct 31. PMID: [26529297](#)

**Article Published Date** : Oct 30, 2015

**Authors** : Madhuri Venigalla, Erika Gyengesi, Matthew J Sharman, Gerald Münch

**Study Type** : Review

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , Apigenin : CK(158) : AC(101) , Curcumin : CK(4128) : AC(2171) , DHA (Docosahexaenoic Acid) : CK(783) : AC(129) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Resveratrol : CK(1232) : AC(737)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## EPA (Eicosapentaenoic Acid) (AC 2) (CK 4)

**Mice experienced a significant improvements in cognitive function, biochemical and histological indicators of AD after consuming a nutrient mix for up to 7 months.**

**Pubmed Data** : PLoS One. 2015;10(11):e0143135. Epub 2015 Nov 25. PMID: [26606074](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Shengyuan Wang, Yu Cu, Chao Wang, Wei Xie, Lan Ma, Jinfeng Zhu, Yan Zhang, Rui Dang, Decai Wang, Yonghui Wu, Qunhong Wu

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Blueberry : CK(258) : AC(89) , DHA (Docosahexaenoic Acid) : CK(783) : AC(129) , EPA (Eicosapentaenoic Acid) : CK(758) : AC(105)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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**The omega-3 fatty acid eicosapentaenoic acid accelerates disease progression in a model of amyotrophic lateral sclerosis.**

**Pubmed Data** : PLoS One. 2013 ;8(4):e61626. Epub 2013 Apr 19. PMID: [23620776](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Ping K Yip, Chiara Pizzasegola, Stacy Gladman, Maria Luigia Biggio, Marianna Marino, Maduka Jayasinghe, Farhan Ullah, Simon C Dyall, Andrea Malaspina, Caterina Bendotti, Adina Michael-Titus

**Study Type** : Animal Study

**Additional Links**

**Substances** : EPA (Eicosapentaenoic Acid) : CK(758) : AC(105)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Lipid Peroxidation : CK(692) : AC(252)

**Pharmacological Actions** : Superoxide Dismutase Up-regulation : CK(504) : AC(169)

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## Echinacea (AC 2) (CK 3)

## An Echinacea compound exhibits neuroprotective effects in the mouse model of Parkinson's disease.

**Pubmed Data** : Eur J Pharmacol. 2007 Jun 14;564(1-3):66-74. Epub 2007 Feb 16. PMID: [17359968](#)

**Article Published Date** : Jun 14, 2007

**Authors** : Xingchao Geng, Xuefei Tian, Pengfei Tu, Xiaoping Pu

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Echinacea](#) : CK(529) : AC(99)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Echinacea has neuroprotective properties.

**Pubmed Data** : Planta Med. 2009 Nov;75(14):1499-504. Epub 2009 Jun 22. PMID: [19548189](#)

**Article Published Date** : Nov 01, 2009

**Authors** : Rong Kuang, Yiguo Sun, Wei Yuan, Li Lei, Xiaoxiang Zheng

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Echinacea](#) : CK(529) : AC(99)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Eicosanoyl-5-hydroxytryptamide (EHT) (AC 1) (CK 2)

## Therapeutic benefits of a component of coffee in a rat model of Alzheimer's disease.

**Pubmed Data** : Neurobiol Aging. 2014 Dec ;35(12):2701-12. Epub 2014 Jun 17. PMID: [25034344](#)

**Article Published Date** : Nov 30, 2014

**Authors** : Gustavo Basurto-Islas, Julie Blanchard, Yunn Chyn Tung, Jose R Fernandez, Michael Voronkov, Maxwell Stock, Sherry Zhang, Jeffry B Stock, Khalid Iqbal

**Study Type** : Animal Study

**Additional Links**

**Substances** : Eicosanoyl-5-hydroxytryptamide (EHT) : CK(2) : AC(1)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Additional Keywords** : Alzheimer's Disease : CK(1283) : AC(376)

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## Elderberry (AC 1) (CK 1)

**Extracts enriched in polyphenols showed promising neuroprotective effects.**

**Pubmed Data** : Curr Top Med Chem. 2016 Feb 4. Epub 2016 Feb 4. PMID: [26845551](#)

**Article Published Date** : Feb 03, 2016

**Authors** : Carmela Spagnuolo, Marianna Napolitano, Idolo Tedesco, Stefania Moccia, Alfonsina Milito, Gian Luigi Russo

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Elderberry : CK(84) : AC(18), Polyphenols : CK(920) : AC(333), Quercetin : CK(557) : AC(246), Resveratrol : CK(1232) : AC(737)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Ellagic Acid (AC 2) (CK 3)

**Ellagic acid application could be a useful memory restorative agent in the treatment of dementia seen in elderly persons.**

**Pubmed Data** : Pharm Biol. 2016 Feb 1:1-7. Epub 2016 Feb 1. PMID: [26828763](#)

**Article Published Date** : Jan 31, 2016

**Authors** : Mohammad Taghi Mansouri, Yaghoub Farbood, Bahareh Naghizadeh, Sohreh Shabani, Mohammad Ali Mirshekar, Alireza Sarkaki

**Study Type :** Animal Study

**Additional Links**

**Substances :** Ellagic Acid : CK(104) : AC(55) , Pomegranate : CK(499) : AC(168)

**Diseases :** Cognitive Decline/Dysfunction : CK(1138) : AC(212) , Dementia : CK(571) : AC(79) , Memory Disorders : CK(340) : AC(103) , Memory Disorders: Drug-Induced : CK(99) : AC(25)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

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## Pomegranate may offer an attractive dietary strategy for the prevention and treatment of AGE-related diseases such as type-2 diabetes and Alzheimer's disease.

**Pubmed Data :** Food Funct. 2014 Nov ;5(11):2996-3004. PMID: [25233108](#)

**Article Published Date :** Oct 31, 2014

**Authors :** Weixi Liu, Hang Ma, Leslie Frost, Tao Yuan, Joel A Dain, Navindra P Seeram

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Ellagic Acid : CK(104) : AC(55) , Pomegranate : CK(499) : AC(168) , Punicalagin : CK(10) : AC(7) , Tannic Acid : CK(25) : AC(21)

**Diseases :** Advanced Glycation End products (AGE) : CK(231) : AC(73) , Alzheimer's Disease : CK(1282) : AC(375) , Diabetes Mellitus: Type 2: Prevention : CK(646) : AC(83)

**Pharmacological Actions :** Antioxidants : CK(7192) : AC(2631)

**Additional Keywords :** Plant Extracts : CK(7288) : AC(2419)

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## Estradiol (E(2)) (AC 8) (CK 13)

### Estradiol may play a role in the neuroprotection of spinal astrocytes in amyotrophic lateral sclerosis patients.

**Pubmed Data :** Neurobiol Dis. 2005 Nov;20(2):461-70. PMID: [15893467](#)

**Article Published Date :** Nov 01, 2005

**Authors :** Paola Platania, Giovanna Seminara, Eleonora Aronica, Dirk Troost, Maria Vincenza Catania, Maria Angela Sortino

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Estradiol (E(2)) : CK(22) : AC(15)

**Diseases :** Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions :** Estrogen Receptor Modulators : CK(51) : AC(31) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Estradiol protects spinal motor neurons from excitotoxic insults in vitro, and may have application as a treatment for ALS.

**Pubmed Data** : Neuroreport. 2000 Nov 9;11(16):3493-7. PMID: [11095506](#)

**Article Published Date** : Nov 09, 2000

**Authors** : T Nakamizo, M Urushitani, R Inoue, A Shinohara, H Sawada, K Honda, T Kihara, A Akaike, S Shimohama

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Estradiol \(E\(2\)\)](#) : [CK\(22\)](#) : [AC\(15\)](#)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : [CK\(567\)](#) : [AC\(140\)](#)

**Pharmacological Actions** : [Neuroprotective Agents](#) : [CK\(2237\)](#) : [AC\(1053\)](#)

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## Estradiol slows neurodegeneration in a female mouse experimental model of amyotrophic lateral sclerosis.

**Pubmed Data** : J Neurol Sci. 2008 May 15;268(1-2):40-7. Epub 2007 Dec 4. PMID: [18054961](#)

**Article Published Date** : May 15, 2008

**Authors** : Chan-Il Choi, Young-Don Lee, Byoung Joo Gwag, Sung Ig Cho, Sung-Soo Kim, Haeyoung Suh-Kim

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Estradiol \(E\(2\)\)](#) : [CK\(22\)](#) : [AC\(15\)](#)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : [CK\(567\)](#) : [AC\(140\)](#)

**Pharmacological Actions** : [Neuroprotective Agents](#) : [CK\(2237\)](#) : [AC\(1053\)](#)

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## Estrogen may have therapeutic value in the treatment of amyotrophic lateral sclerosis and spinal cord injury.

**Pubmed Data** : J Endocrinol. 2011 Feb;208(2):171-82. Epub 2010 Nov 10. PMID: [21068071](#)

**Article Published Date** : Feb 01, 2011

**Authors** : Arabinda Das, Joshua A Smith, Cameron Gibson, Abhay K Varma, Swapan K Ray, Naren L Banik

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Estradiol \(E\(2\)\)](#) : [CK\(22\)](#) : [AC\(15\)](#)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : [CK\(567\)](#) : [AC\(140\)](#) , [Spinal Cord Injuries](#) : [CK\(137\)](#) : [AC\(45\)](#)

**Pharmacological Actions** : [Neuroprotective Agents](#) : [CK\(2237\)](#) : [AC\(1053\)](#) , [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : [CK\(1752\)](#) : [AC\(641\)](#)

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## Female sex hormones such as estradiol and exercise have

## a possible neuroprotective role in female patients with ALS.

**Pubmed Data** : Med Hypotheses. 2009 Apr;72(4):434-43. Epub 2009 Jan 19. PMID: [14561497](#)

**Article Published Date** : Apr 01, 2009

**Authors** : J H Veldink, P R Bär, E A J Joosten, M Otten, J H J Wokke, L H van den Berg

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Estradiol \(E\(2\)\)](#) : CK(22) : AC(15)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Gender Differences](#) : CK(63) : AC(8)

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## Steroid hormones may have neuroprotective properties in ALS.

**Pubmed Data** : Cell Mol Neurobiol. 2001 Jun;21(3):237-54. PMID: [11569536](#)

**Article Published Date** : Jun 01, 2001

**Authors** : M C González Deniselle, S L González, A F De Nicola

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Estradiol \(E\(2\)\)](#) : CK(22) : AC(15), [Progesterone](#) : CK(70) : AC(26), [Testosterone](#) : CK(164) : AC(29)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140), [Motor Neuron Disease](#) : CK(464) : AC(102)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## There is evidence that estradiol may have neuroprotective properties.

**Pubmed Data** : J Alzheimers Dis. 2011;23(4):629-39. PMID: [21157032](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Kebreten F Manaye, Joanne S Allard, Sara Kalifa, Amy C Drew, Guang Xu, Donald K Ingram, Rafael de Cabo, Peter R Mouton

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Estradiol \(E\(2\)\)](#) : CK(22) : AC(15)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Brain: Microglial Activation](#) : CK(82) : AC(53), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Ovariectomy-Induced Changes](#) : CK(80) : AC(37)

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## Treatment with estradiol (E2) may also delay disease progression of post-menopausal women with ALS.

**Pubmed Data** : Brain Res. 2004 Sep 17;1021(1):128-31. PMID: [15328040](#)

**Article Published Date** : Sep 17, 2004

**Authors** : G J Groeneveld, F L Van Muiswinkel, J M Sturkenboom, J H J Wokke, P R Bär, L H Van den Berg

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Estradiol \(E2\)](#) : CK(22) : AC(15)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Evodia ruteacarpa (AC 1) (CK 2)

### Evodia rutaecarpa has acetylcholinesterase inhibition and anti-amnesic activities which may be useful in the treatment of Alzheimers

**Pubmed Data** : BMC Cancer. 2010;10:238. Epub 2010 May 26. PMID: [8923803](#)

**Article Published Date** : Jan 01, 2010

**Authors** : C H Park, S H Kim, W Choi, Y J Lee, J S Kim, S S Kang, Y H Suh

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Evodia rutaecarpa](#) : CK(7) : AC(9)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Amnesia](#) : CK(10) : AC(5)

**Pharmacological Actions** : [Acetylcholinesterase Inhibitor](#) : CK(36) : AC(18)

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## Fermented Foods and Beverages (AC 1) (CK 1)

## Fermented papaya preparation may have a number of therapeutic applications in the prevention of chronic and degenerative disease conditions.

**Pubmed Data** : Toxicology. 2010 Sep 23. Epub 2010 Sep 23. PMID: [20870007](#)

**Article Published Date** : Sep 23, 2010

**Authors** : Okezie I Aruoma, Yuki Hayashi, Francesco Marotta, Pierre Mantello, Eliezer Rachmilewitz, Luc Montagnier

**Study Type** : Review

### Additional Links

**Substances** : Fermented Foods and Beverages : CK(864) : AC(194) , Papaya : CK(105) : AC(45)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630)

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## Ferulic acid (AC 2) (CK 3)

### This study presents the role of ferulic acid as inhibitor or disaggregating agent of amyloid structures as well as its effects on biological models.

**Pubmed Data** : Nutrients. 2015;7(7):5764-5782. Epub 2015 Jul 15. PMID: [26184304](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Antonella Sgarbossa, Daniela Giacomazza, Marta Di Carlo

**Study Type** : Review

### Additional Links

**Substances** : Ferulic acid : CK(33) : AC(21)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain: Oxidative Stress : CK(75) : AC(44) , Mitochondrial Dysfunction : CK(224) : AC(90)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Neuroprotective Agents : CK(2235) : AC(1052)

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### This study provides elementary evidence for the neuroprotective action of ferulic acid against MPTP-induced parkinson's disease in mice.

**Pubmed Data** : Pharm Biol. 2015 Apr 10:1-11. Epub 2015 Apr 10. PMID: [25857436](#)

**Article Published Date** : Apr 09, 2015

**Authors** : Sangeetha Nagarajan, David Raj Chellappan, Prabu Chinnaswamy, Senthilkumar Thulasingam

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ferulic acid : CK(33) : AC(21)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Antiparkinson Agents : CK(2) : AC(1), Neuroprotective Agents : CK(2235) : AC(1052)

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## Fiber (AC 1) (CK 1)

**A high fiber diet in the gut might alter gene expression in the brain to prevent neurodegeneration and promote regeneration.**

**Pubmed Data** : Neurosci Lett. 2016 Feb 8. Epub 2016 Feb 8. PMID: [26868600](#)

**Article Published Date** : Feb 07, 2016

**Authors** : Megan W Bourassa, Ishraq Alim, Scott J Bultman, Rajiv R Ratan

**Study Type** : Review

**Additional Links**

**Substances** : Butyrate : CK(3) : AC(3), Fiber : CK(808) : AC(103), Probiotics : CK(2852) : AC(361)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Neuroprotective Agents : CK(2237) : AC(1053), Neuroprotective Agents : CK(2237) : AC(1053)

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## Fig (AC 1) (CK 2)

**Dietary supplementation of figs may be useful for the improvement of cognitive and behavioural deficits in**

## Alzheimer's disease.

**Pubmed Data** : Nutr Neurosci. 2014 Jun 18. Epub 2014 Jun 18. PMID: [24938828](#)

**Article Published Date** : Jun 17, 2014

**Authors** : Selvaraju Subash, Musthafa Mohamed Essa, Nady Braidy, Ahood Al-Jabri, Ragini Vaishnav, Samir Al-Adawi, Abdullah Al-Asmi, Gilles J Guillemin

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Fig : CK(24) : AC(2)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Fisetin (AC 1) (CK 2)

**Fisetin may slow or prevent neurodegeneration and can be utilised as neuroprotective agent against Alzheimer's and Parkinson's disease.**

**Pubmed Data** : J Nutr Biochem. 2015 Aug 8. Epub 2015 Aug 8. PMID: [26411262](#)

**Article Published Date** : Aug 07, 2015

**Authors** : Dharmalingam Prakash, Ganapasam Sudhandiran

**Study Type** : Animal Study

**Additional Links**

**Substances** : Fisetin : CK(20) : AC(18)

**Diseases** : Aluminum Toxicity : CK(195) : AC(75) , Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201) , Neuroprotective Agents : CK(2237) : AC(1053)

**Problem Substances** : Aluminum Chloride : CK(29) : AC(12)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Fish Oil (AC 1) (CK 1)

## A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

### Additional Links

**Substances** : Chromium : CK(56) : AC(12) , Cinnamon : CK(243) : AC(88) , Cocoa : CK(522) : AC(77) , DHA (Docosahexaenoic Acid) : CK(783) : AC(129) , Fish Oil : CK(701) : AC(111) , Folic Acid : CK(643) : AC(93) , Genistein : CK(515) : AC(228) , Hops : CK(76) : AC(26) , Policosanol : CK(194) : AC(25) , Sesame Seeds : CK(235) : AC(71) , Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Neurodegenerative Diseases : CK(3370) : AC(846)

## Flavonoids (AC 16) (CK 31)

### A review of phytochemicals and their neuroprotective effects in the treatment of dementia.

**Pubmed Data** : Molecules. 2016 ;21(4). Epub 2016 Apr 21. PMID: [27110749](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Rosaliana Libro, Sabrina Giacoppo, Thangavelu Soundara Rajan, Placido Bramanti, Emanuela Mazzon

**Study Type** : Review

### Additional Links

**Substances** : Cannabidiol : CK(1112) : AC(334) , Cannabinoids : CK(700) : AC(272) , Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

### Baicalein and daidzein had a synergistic effect estrogenic and neuroprotective activities in alzheimer's disease and enhanced the effects of different flavonoids.

**Pubmed Data** : Evid Based Complement Alternat Med. 2013 ;2013:635694. Epub 2013 Aug 24. PMID: [24058373](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Roy C Y Choi, Judy T T Zhu, Amanda W Y Yung, Pinky S C Lee, Sherry L Xu, Ava J Y Guo, Kevin Y Zhu, Tina T X Dong, Karl W K Tsim

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Baicalein : CK(57) : AC(41), Daidzein : CK(111) : AC(32), Flavonoids : CK(1194) : AC(376)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Alzheimer's Disease : CK(1282) : AC(375), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Estrogen Receptor Agonist : CK(2) : AC(2), Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Bioenhancer : CK(8) : AC(5), Natural Substance Synergy : CK(534) : AC(244)

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## Both curcumin and its metabolite tetrahydrocurcumin exert neuroprotection against chemically-induced neurotoxicity.

**Pubmed Data** : Inflammopharmacology. 2008 Apr;16(2):96-9. PMID: [18408903](#)

**Article Published Date** : Apr 01, 2008

**Authors** : A Rajeswari, M Sabesan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Tetrahydrocurcumin : CK(66) : AC(30)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Flavonoids from persimmon leaves may have a therapeutic role in preventing and treating brain injuries and/or inflammation.

**Pubmed Data** : Zhong Yao Cai. 2009 May;32(5):740-4. PMID: [19771850](#)

**Article Published Date** : May 01, 2009

**Authors** : Wei-Jian Bei, An-Long Xu, Chu-Yuan Li, Peter J Cabot, Siobhan Hermanussen

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376), Persimmon : CK(30) : AC(14)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Brain Injury: Traumatic : CK(99) : AC(30), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Grape seed extract has inhibiting effect on the

## accumulation of age-related oxidative DNA damages in the central nervous system of rats.

**Pubmed Data** : Brain Res Bull. 2006 Feb 15;68(6):469-73. Epub 2005 Nov 2. PMID: [16459205](#)

**Article Published Date** : Feb 15, 2006

**Authors** : Muthaiya Balu, Purushotham Sangeetha, Ganesan Murali, Chinnakannu Panneerselvam

**Study Type** : Animal Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333)

**Diseases** : Aging: Brain : CK(246) : AC(84), DNA damage : CK(969) : AC(377) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419) , Proanthocyanidins : CK(203) : AC(54)

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## Grape seed polyphenols and curcumin reduce genomic instability events in a transgenic mouse model for Alzheimer's disease.

**Pubmed Data** : Mutat Res. 2009 Feb 10;661(1-2):25-34. Epub 2008 Nov 6. PMID: [19027755](#)

**Article Published Date** : Feb 10, 2009

**Authors** : Philip Thomas, Yan-Jiang Wang, Jin-Hua Zhong, Shantha Kosaraju, Nathan J O'Callaghan, Xin-Fu Zhou, Michael Fenech

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Flavonoids : CK(1194) : AC(376) , Grapefruit Seed Extract : CK(37) : AC(14), Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Genoprotective : CK(259) : AC(95) , Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Moderate consumption of Cabernet Sauvignon attenuates Abeta neuropathology in a mouse model of Alzheimer's disease.

**Pubmed Data** : FASEB J. 2006 Nov;20(13):2313-20. PMID: [17077308](#)

**Article Published Date** : Nov 01, 2006

**Authors** : Jun Wang, Lap Ho, Zhong Zhao, Ilana Seror, Nelson Humala, Dara L Dickstein, Meenakshisundaram Thiyagarajan, Susan S Percival, Stephen T Talcott, Giulio Maria Pasinetti

**Study Type** : Animal Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333) , Wine : CK(197) :

## Polyphenols or other phytochemicals appear to be potential and promising class of therapeutics for the treatment of diseases with a multifactorial etiology.

**Pubmed Data** : Pharmacogn Rev. 2012 Jul ;6(12):81-90. PMID: [23055633](#)

**Article Published Date** : Jun 30, 2012

**Authors** : G Phani Kumar, Farhath Khanum

**Study Type** : Review

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Dementia : CK(571) : AC(79) , Depression : CK(1820) : AC(263) , Neurodegenerative Diseases : CK(3370) : AC(846) , Psychiatric Disorders : CK(110) : AC(27) , Schizophrenia : CK(434) : AC(68)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## Pycnogenol protects neurons from amyloid-beta peptide-induced cell death.

**Pubmed Data** : Brain Res Mol Brain Res. 2002 Jul 15;104(1):55-65. PMID: [12117551](#)

**Article Published Date** : Jul 15, 2002

**Authors** : Q L Peng, A R Buz'Zard, B H S Lau

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Apoptotic : CK(2941) : AC(2062) , Neuroprotective Agents : CK(2235) : AC(1052)

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## R. damascena can reverse behavioural deficits caused by amyloid-A- $\beta$ in rats.

**Pubmed Data** : Adv Biomed Res. 2015 ;4:131. Epub 2015 Jul 27. PMID: [26322279](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Ebrahim Esfandiary, Mohammad Karimipour, Mohammad Mardani, Mustafa Ghanadian, Hojjat Allah Alaei, Daryoush Mohammadnejad, Abolghasem Esmaeili

**Study Type** : Animal Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Rose : CK(167) : AC(46)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Resveratrol protects dopamine neurons against lipopolysaccharide-induced neurotoxicity.

**Pubmed Data** : Mol Pharmacol. 2010 Sep 1;78(3):466-77. Epub 2010 Jun 16. PMID: [20554604](#)

**Article Published Date** : Sep 01, 2010

**Authors** : Feng Zhang, Jing-Shan Shi, Hui Zhou, Belinda Wilson, Jau-Shyong Hong, Hui-Ming Gao

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Flavonoids](#) : CK(1194) : AC(376) , [Polyphenols](#) : CK(920) : AC(333) , [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Brain: Microglial Activation](#) : CK(82) : AC(53) , [Lipopolysaccharide-Induced Toxicity](#) : CK(357) : AC(216) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## Resveratrol's therapeutic properties in neurodegenerative conditions may be due to its gene protective and regulatory as well as antioxidant properties.

**Pubmed Data** : Neuropharmacology. 2008 Jun;54(7):1112-9. Epub 2008 Mar 16. PMID: [15956815](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Sylvain Doré

**Study Type** : Review

### Additional Links

**Substances** : [Flavonoids](#) : CK(1194) : AC(376) , [Polyphenols](#) : CK(920) : AC(333) , [Red Wine Extract](#) : CK(114) : AC(32) , [Resveratrol](#) : CK(1232) : AC(737) , [Wine](#) : CK(197) : AC(44)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Brain Inflammation](#) : CK(246) : AC(140) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Oxidative Stress](#) : CK(3800) : AC(1357) , [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## Review: Therapeutic potential of resveratrol in Alzheimer's disease.

**Pubmed Data** : BMC Neurosci. 2008;9 Suppl 2:S6. Epub 2008 Dec 3. PMID: [19090994](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Valérie Vingtdeux, Ute Dreses-Werringloer, Haitian Zhao, Peter Davies, Philippe

Marambaud

**Study Type** : Review

**Additional Links**

**Substances** : [Flavonoids](#) : CK(1194) : AC(376) , [Polyphenols](#) : CK(920) : AC(333) , [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## The flavonoid extracted from citrus known as luteolin reduces Alzheimer's disease beta-amyloid plaque production in mice.

**Pubmed Data** : J Cell Mol Med. 2009 Mar;13(3):574-88. Epub 2008 Apr 9. PMID: [18410522](#)

**Article Published Date** : Mar 01, 2009

**Authors** : Kavon Rezai-Zadeh, R Douglas Shytle, Yun Bai, Jun Tian, Huayan Hou, Takashi Mori, Jin Zeng, Demian Obregon, Terrence Town, Jun Tan

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Flavonoids](#) : CK(1194) : AC(376) , [Luteolin](#) : CK(104) : AC(78)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## These findings suggest that the intake of some flavonoids may reduce Parkinson's disease risk.

**Pubmed Data** : Neurology. 2012 Apr 10 ;78(15):1138-45. Epub 2012 Apr 4. PMID: [22491871](#)

**Article Published Date** : Apr 09, 2012

**Authors** : X Gao, A Cassidy, M A Schwarzschild, E B Rimm, A Ascherio

**Study Type** : Human Study

**Additional Links**

**Substances** : [Anthocyanins](#) : CK(332) : AC(114) , [Flavonoids](#) : CK(1194) : AC(376)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Whole-grape products are safer choices for better health and disease prevention. But for advanced disease conditions, individual grape ingredients or combinations appear to be better.

**Pubmed Data** : Ann N Y Acad Sci. 2015 Jun 22. Epub 2015 Jun 22. PMID: [26099945](#)

**Article Published Date** : Jun 21, 2015

**Authors** : Chandra K Singh, Xiaoqi Liu, Nihal Ahmad

**Study Type :** Commentary

**Additional Links**

**Substances :** Anthocyanins : CK(332) : AC(114), Catechin : CK(512) : AC(169), Flavonoids : CK(1194) : AC(376), Grapes : CK(26) : AC(7), Polyphenols : CK(920) : AC(333), Resveratrol : CK(1232) : AC(737)

**Diseases :** Cancers: All : CK(14297) : AC(4542), Neurodegenerative Diseases : CK(3370) : AC(846)

**Additional Keywords :** Natural Substance Synergy : CK(534) : AC(244), Natural Substance Synergy : CK(534) : AC(244)

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## Folate (AC 2) (CK 12)

**Folate intake below the recommended daily allowance may increase risk for mild cognitive impairment and probable dementia in later life.**

**Pubmed Data :** J Acad Nutr Diet. 2015 Feb ;115(2):231-41. Epub 2014 Sep 8. PMID: [25201007](#)

**Article Published Date :** Jan 31, 2015

**Authors :** Jessica C Agnew-Blais, Sylvia Wassertheil-Smoller, Jae H Kang, Patricia E Hogan, Laura H Coker, Linda G Snetselaar, Jordan W Smoller

**Study Type :** Human Study

**Additional Links**

**Substances :** Folate : CK(169) : AC(25)

**Diseases :** Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79)

**Additional Keywords :** Dementia : CK(571) : AC(79)

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**Folic acid increases methylation potential and DNMT activity, modifies DNA methylation and ultimately decreases APP, PS1 and A $\beta$  protein levels.**

**Pubmed Data :** J Nutr Biochem. 2015 Aug ;26(8):883-91. Epub 2015 Apr 28. PMID: [25959374](#)

**Article Published Date :** Jul 31, 2015

**Authors :** Wen Li, Huan Liu, Min Yu, Xumei Zhang, Meilin Zhang, John X Wilson, Guowei Huang

**Study Type :** Transgenic Animal Study

**Additional Links**

**Substances :** Folate : CK(169) : AC(25), Folic Acid : CK(643) : AC(93)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375), Folic Acid/Folate Deficiency : CK(85) : AC(2)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords :** DNA Methylation : CK(104) : AC(25), Epigenetic Modification : CK(218) : AC(88)

## Folic Acid (AC 14) (CK 64)

### A combination of nutrients improves cognitive functioning while decreasing Alzheimer disease neuropathology in an animal model.

**Pubmed Data** : PLoS One. 2010;5(11):e14015. Epub 2010 Nov 17. PMID: [21103342](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Anna Parachikova, Kim N Green, Curt Hendrix, Frank M LaFerla

**Study Type** : Animal Study

#### Additional Links

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , B-complex : CK(268) : AC(31) , Curcumin : CK(4128) : AC(2171) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Folic Acid : CK(643) : AC(93) , NAC (N-acetyl-L-cysteine) : CK(295) : AC(72) , Piperine : CK(114) : AC(60) , Vitamin C : CK(1953) : AC(401)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

### A multi-vitamin/nutrient formula has therapeutic value in early-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Dement. 2008 Dec-2009 Jan;23(6):571-85. Epub 2008 Dec 1. PMID: [19047474](#)

**Article Published Date** : Dec 01, 2008

**Authors** : Amy Chan, James Paskavitz, Ruth Remington, Shelly Rasmussen, Thomas B Shea

**Study Type** : Human Study

#### Additional Links

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93) , NAC (N-acetyl-L-cysteine) : CK(295) : AC(72) , SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-6 : CK(435) : AC(54) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

### A multi-vitamin/nutrient formula has therapeutic value in moderate-stage to later-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Dement. 2009 Feb-Mar;24(1):27-33. Epub 2008 Dec 3. PMID: [19056706](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Ruth Remington, Amy Chan, James Paskavitz, Thomas B Shea

**Study Type** : Human Study

**Additional Links**

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-12 : CK(770) : AC(103), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : Chromium : CK(56) : AC(12) , Cinnamon : CK(243) : AC(88), Cocoa : CK(522) : AC(77), DHA (Docosahexaenoic Acid) : CK(783) : AC(129) , Fish Oil : CK(701) : AC(111) , Folic Acid : CK(643) : AC(93), Genistein : CK(515) : AC(228) , Hops : CK(76) : AC(26) , Policosanol : CK(194) : AC(25) , Sesame Seeds : CK(235) : AC(71), Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Neurodegenerative Diseases : CK(3370) : AC(846)

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## B vitamins appear to slow cognitive and clinical decline in people with mild cognitive impairment, in particular in those with elevated homocysteine.

**Pubmed Data** : Int J Geriatr Psychiatry. 2011 Jul 21. Epub 2011 Jul 21. PMID: [21780182](#)

**Article Published Date** : Jul 21, 2011

**Authors** : Celeste A de Jager, Abderrahim Oulhaj, Robin Jacoby, Helga Refsum, A David Smith

**Study Type** : Human Study

**Additional Links**

**Substances** : Folic Acid : CK(643) : AC(93), Vitamin B-12 : CK(770) : AC(103) , Vitamin B-6 : CK(435) : AC(54)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212), High Homocysteine : CK(431) : AC(63) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Folic acid deficiency may play a key role in neurodegenerative disorders.

**Pubmed Data** : Neurosci Lett. 2007 Jun 15;420(3):213-6. Epub 2007 May 3. PMID: [17532571](#)

**Article Published Date** : Jun 15, 2007

**Authors** : Carlo Lovati, Daniela Galimberti, Simone Pomati, Elisa Capiluppi, Alberto Dolci, Luisa Scapellato, Silvia Rosa, Enrico Mailland, Massimo Suardelli, Alessandra Vanotti, Francesca Clerici, Donatella Santarato, Mauro Panteghini, Elio Scarpini, Claudio Mariani, Pierluigi Bertora

**Study Type** : Human Study

**Additional Links**

**Substances** : Folic Acid : CK(643) : AC(93)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Dementia : CK(571) : AC(79) , Lewy Body Disease : CK(10) : AC(1)

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## Folic acid increases methylation potential and DNMT activity, modifies DNA methylation and ultimately decreases APP, PS1 and A $\beta$ protein levels.

**Pubmed Data** : J Nutr Biochem. 2015 Aug ;26(8):883-91. Epub 2015 Apr 28. PMID: [25959374](#)

**Article Published Date** : Jul 31, 2015

**Authors** : Wen Li, Huan Liu, Min Yu, Xumei Zhang, Meilin Zhang, John X Wilson, Guowei Huang

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Folate : CK(169) : AC(25) , Folic Acid : CK(643) : AC(93)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Folic Acid/Folate Deficiency : CK(85) : AC(2)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : DNA Methylation : CK(104) : AC(25) , Epigenetic Modification : CK(218) : AC(88)

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## Folic acid induces methylation potential-dependent DNMT enzymes, thereby attenuating A $\beta$ production.

**Pubmed Data** : Int J Mol Sci. 2015 ;16(10):25002-13. Epub 2015 Oct 20. PMID: [26492244](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Wen Li, Mingyue Jiang, Shijing Zhao, Huan Liu, Xumei Zhang, John X Wilson, Guowei Huang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Folic Acid : CK(643) : AC(93)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : DNA Methylation : CK(104) : AC(25) , Gene Expression Regulation : CK(422) : AC(209)

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## Genistein and folic acid prevent oxidative injury induced by $\beta$ -Amyloid peptide.

**Pubmed Data** : Basic Clin Pharmacol Toxicol. 2010 Nov 29. Epub 2010 Nov 29. PMID: [21205217](#)

**Article Published Date** : Nov 29, 2010

**Authors** : Bingjie Ding, Linhong Yuan, Huanling Yu, Li Li, Weiwei Ma, Yanxia Bi, Jinfang Feng, Rong Xiao

**Study Type** : Animal Study

**Additional Links**

**Substances** : Folic Acid : CK(643) : AC(93), Genistein : CK(515) : AC(228)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Levodopa treatment of Parkinsons disease results in hyperhomocysteinemia, which would be prevented by increased intake of vitamin b12, vitamin b6 and folate.

**Pubmed Data** : CNS Neurol Disord Drug Targets. 2008 Feb;7(1):20-7. PMID: [18289028](#)

**Article Published Date** : Feb 01, 2008

**Authors** : G Ali Qureshi, Aftab A Qureshi, Bika Ram Devrajani, M A Chippa, S Ali Syed

**Study Type** : Review

**Additional Links**

**Substances** : Folic Acid : CK(643) : AC(93), Vitamin B-12 : CK(770) : AC(103), Vitamin B-6 : CK(435) : AC(54)

**Diseases** : High Homocysteine : CK(431) : AC(63), Parkinson's Disease : CK(526) : AC(164)

**Additional Keywords** : Diseases that are Linked : CK(2285) : AC(299)

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## Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : Clin Nutr. 2009 Dec;28(6):604-17. Epub 2009 Sep 25. PMID: [19782443](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Barkha P Patel, Mazen J Hamadeh

**Study Type** : Commentary

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), Carnitine : CK(434) : AC(66), Coenzyme Q10 : CK(941) : AC(140), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Folic Acid : CK(643) : AC(93), Ginkgo biloba : CK(796) : AC(161), Melatonin : CK(946) : AC(304), Red Wine Extract : CK(114) : AC(32), Vitamin E : CK(1656) : AC(290)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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**These results revealed a role for folic acid in the JAK-STAT and LTD signaling pathways which may be relevant to AD pathogenesis.**

**Pubmed Data** : Mol Neurobiol. 2015 Dec 1. Epub 2015 Dec 1. PMID: [26627706](#)

**Article Published Date** : Nov 30, 2015

**Authors** : Wen Li, Huan Liu, Min Yu, Xumei Zhang, Yan Zhang, Hongbo Liu, John X Wilson, Guowei Huang

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Folic Acid](#) : CK(643) : AC(93)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Dementia](#) : CK(571) : AC(79)

**Additional Keywords** : [Gene Expression Regulation](#) : CK(424) : AC(210) , [Risk Reduction](#) : CK(6136) : AC(658)

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## These results suggest a mechanism by which folic acid may prevent A $\beta$ oligomer-induced neuronal toxicity.

**Pubmed Data** : Eur J Nutr. 2015 Jul 30. Epub 2015 Jul 30. PMID: [26224648](#)

**Article Published Date** : Jul 29, 2015

**Authors** : Huan Liu, Wen Li, Shijing Zhao, Xumei Zhang, Meilin Zhang, Yanyu Xiao, John X Wilson, Guowei Huang

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Folic Acid](#) : CK(643) : AC(93)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [DNA Methylation](#) : CK(104) : AC(25)

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## Vitamin supplementation leads to reduced levels of carbonyl proteins in patients.

**Pubmed Data** : Neurodegener Dis. 2016 ;16(3-4):284-9. Epub 2015 Nov 21. PMID: [26587902](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Paulus S Rommer, Dietmar Fuchs, Friedrich Leblhuber, Rainer Schroth, Michaela Greilberger, Erwin Tafeit, Joachim Greilberger

**Study Type** : Human Study

**Additional Links**

**Substances** : [Folic Acid](#) : CK(643) : AC(93), [Thiamine \(B-1\)](#) : CK(106) : AC(18), [Vitamin B-12](#) : CK(770) : AC(103), [Vitamin B-6](#) : CK(435) : AC(54)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Fruit: All (AC 2) (CK 11)

**A higher intake of food rich in antioxidants such as fruit and vegetables confer protection against the development of ALS.**

**Pubmed Data** : Life Sci. 2003 Dec 19;74(5):663-73. PMID: [19209004](#)

**Article Published Date** : Dec 19, 2003

**Authors** : K Okamoto, T Kihira, G Kobashi, M Washio, S Sasaki, T Yokoyama, Y Miyake, N Sakamoto, Y Inaba, M Nagai

**Study Type** : Human Study

**Additional Links**

**Substances** : Fruit: All : CK(3530) : AC(769) , Vegetables: All : CK(1032) : AC(113)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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**The additive and synergistic effects of phytochemicals in fruit and vegetables are responsible for their potent antioxidant and anticancer activities.**

**Pubmed Data** : Am J Clin Nutr. 2003 Sep ;78(3 Suppl):517S-520S. PMID: [12936943](#)

**Article Published Date** : Aug 31, 2003

**Authors** : Rui Hai Liu

**Study Type** : Review

**Additional Links**

**Substances** : Fruit: All : CK(3530) : AC(769) , Polyphenols : CK(920) : AC(333) , Vegetables: All : CK(1032) : AC(113)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cancers: All : CK(14297) : AC(4542) , Cardiovascular Diseases : CK(7018) : AC(887)

**Pharmacological Actions** : Anticarcinogenic Agents : CK(1071) : AC(514) , Antioxidants : CK(7191) : AC(2630) , Cardioprotective : CK(1574) : AC(400)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244) , The Whole is Greater than the Parts : CK(1) : AC(1)

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## Fucoidan (AC 4) (CK 5)

## "Anti-inflammatory effects of fucoidan through inhibition of NF-κB, MAPK and Akt activation in lipopolysaccharide-induced BV2 microglia cells."

**Pubmed Data** : Food Chem Toxicol. 2011 Aug ;49(8):1745-52. Epub 2011 May 4. PMID: [21570441](#)

**Article Published Date** : Jul 31, 2011

**Authors** : Hye Young Park, Min Ho Han, Cheol Park, Cheng-Yun Jin, Gi-Young Kim, Il-Whan Choi, Nam Deuk Kim, Taek-Jeong Nam, Taeg Kyu Kwon, Yung Hyun Choi

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Fucoidan : CK(196) : AC(101)

**Diseases** : Brain: Microglial Activation : CK(82) : AC(53) , Brain Inflammation : CK(246) : AC(140), Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Cyclooxygenase 2 Inhibitors : CK(448) : AC(267), Interleukin-1 beta downregulation : CK(452) : AC(199) , NF-kappaB Inhibitor : CK(1100) : AC(686), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## "Fucoidan protects against dopaminergic neuron death in vivo and in vitro."

**Pubmed Data** : Eur J Pharmacol. 2009 Sep 1 ;617(1-3):33-40. Epub 2009 Jun 21. PMID: [19545563](#)

**Article Published Date** : Aug 31, 2009

**Authors** : Dingzhen Luo, Quanbin Zhang, Haomin Wang, Yanqiu Cui, Zuoli Sun, Jian Yang, Yan Zheng, Jun Jia, Fen Yu, Xuan Wang, Xiaomin Wang

**Study Type** : Animal Study

**Additional Links**

**Substances** : Fucoidan : CK(196) : AC(101)

**Diseases** : Dopamine Deficiency : CK(38) : AC(8) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Apoptotic : CK(2941) : AC(2062), Neuroprotective Agents : CK(2235) : AC(1052)

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## Fucoidan has a neuroprotective effect on H2O2-induced apoptosis in PC12 cells.

**Pubmed Data** : Cell Mol Neurobiol. 2012 May ;32(4):523-9. Epub 2012 Jan 6. PMID: [22222440](#)

**Article Published Date** : Apr 30, 2012

**Authors** : Yonglin Gao, Chaohua Dong, Jungang Yin, Jingyu Shen, Jingwei Tian, Chunmei Li

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Fucoidan : CK(196) : AC(101)

**Diseases** : Hydrogen Peroxide Induced Toxicity : CK(2) : AC(2) , Neurodegenerative Diseases : CK(3370) : AC(846)

## Fucoidan has an inhibitory effect on nitric oxide production in lipopolysaccharide-activated primary microglia.

**Pubmed Data :** Clin Exp Pharmacol Physiol. 2010 Apr ;37(4):422-8. Epub 2009 Oct 16. PMID: [19843098](#)

**Article Published Date :** Mar 31, 2010

**Authors :** Yan-Qiu Cui, Li-Juan Zhang, Ting Zhang, Ding-Zhen Luo, Yan-Jun Jia, Zi-Xuan Guo, Quan-Bin Zhang, Xuan Wang, Xiao-Min Wang

**Study Type :** In Vitro Study

### Additional Links

**Substances :** [Fucoidan](#) : CK(196) : AC(101)

**Diseases :** [Brain: Microglial Activation](#) : CK(82) : AC(53) , [Lipopolysaccharide-Induced Toxicity](#) : CK(357) : AC(216) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053) , [Nitric Oxide Inhibitor](#) : CK(223) : AC(108)

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## Galactooligosaccharides (AC 1) (CK 2)

### "Galactooligosaccharide improves the animal survival and alleviates motor neuron death in SOD1G93A mouse model of amyotrophic lateral sclerosis."

**Pubmed Data :** Neuroscience. 2013 Aug 29 ;246:281-90. Epub 2013 May 11. PMID: [23673277](#)

**Article Published Date :** Aug 28, 2013

**Authors :** L Song, Y Gao, X Zhang, W Le

**Study Type :** Animal Study

### Additional Links

**Substances :** [Galactooligosaccharides](#) : CK(2) : AC(1) , [Prebiotics](#) : CK(159) : AC(30)

**Diseases :** [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions :** [Apoptotic](#) : CK(2942) : AC(2063) , [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

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## Garlic (AC 3) (CK 3)

### Garlic has neuroprotective properties against amyloid-beta peptide-induced programmed cell death in vitro.

**Pubmed Data** : Med Sci Monit. 2002 Aug;8(8):BR328-37. PMID: [12165737](#)

**Article Published Date** : Aug 01, 2002

**Authors** : Qiaoling Peng, Amber R Buz'Zard, Benjamin H S Lau

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Garlic](#) : CK(712) : AC(225)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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### Nutraceuticals derived from such spices as turmeric, red pepper, black pepper, licorice, clove, ginger, garlic, coriander, and cinnamon target inflammatory pathways, thereby preventing neurodegenerative diseases.

**Pubmed Data** : Mol Neurobiol. 2011 Oct ;44(2):142-59. Epub 2011 Mar 1. PMID: [21360003](#)

**Article Published Date** : Oct 01, 2011

**Authors** : Ramaswamy Kannappan, Subash Chandra Gupta, Ji Hye Kim, Simone Reuter, Bharat Bhushan Aggarwal

**Study Type** : Review

**Additional Links**

**Substances** : [Black Pepper](#) : CK(229) : AC(96) , [Cinnamon](#) : CK(243) : AC(88) , [Clove](#) : CK(104) : AC(55) , [Coriander](#) : CK(1) : AC(1) , [Garlic](#) : CK(712) : AC(225) , [Ginger](#) : CK(676) : AC(175) , [Licorice](#) : CK(345) : AC(110) , [Red Pepper](#) : CK(4) : AC(2)

**Diseases** : [Inflammation](#) : CK(2863) : AC(839) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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### One of the most potent anti-neuroinflammatory components of garlic, DATS is highly promising for use as a dietary agent to prevent inflammation-related neurodegenerative disease.

**Pubmed Data** : Molecules. 2014 ;19(11):17697-714. Epub 2014 Oct 31. PMID: [25365295](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Su-Chen Ho, Min-Sheng Su

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Garlic](#) : CK(712) : AC(225)

**Diseases** : [Brain Inflammation](#) : CK(246) : AC(140), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Genistein (AC 6) (CK 9)

**A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.**

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : [Chromium](#) : CK(56) : AC(12), [Cinnamon](#) : CK(243) : AC(88), [Cocoa](#) : CK(522) : AC(77), [DHA \(Docosahexaenoic Acid\)](#) : CK(783) : AC(129), [Fish Oil](#) : CK(701) : AC(111), [Folic Acid](#) : CK(643) : AC(93), [Genistein](#) : CK(515) : AC(228), [Hops](#) : CK(76) : AC(26), [Policosanol](#) : CK(194) : AC(25), [Sesame Seeds](#) : CK(235) : AC(71), [Vitamin D](#) : CK(3113) : AC(441)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

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**Genistein ameliorates learning and memory deficits in an animal model of Alzheimer disease.**

**Pubmed Data** : Neurobiol Learn Mem. 2011 Mar;95(3):270-6. Epub 2010 Dec 7. PMID: [21144907](#)

**Article Published Date** : Mar 01, 2011

**Authors** : Maryam Bagheri, Mohammad-Taghi Joghataei, Simin Mohseni, Mehrdad Roghani

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Genistein](#) : CK(515) : AC(228)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Learning disorders](#) : CK(188) : AC(50), [Memory Impairment: Hormone Deficiency Induced](#) : CK(24) : AC(9)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Genistein and folic acid prevent oxidative injury induced by $\beta$ -Amyloid peptide.

**Pubmed Data** : Basic Clin Pharmacol Toxicol. 2010 Nov 29. Epub 2010 Nov 29. PMID: [21205217](#)

**Article Published Date** : Nov 29, 2010

**Authors** : Bingjie Ding, Linhong Yuan, Huanling Yu, Li Li, Weiwei Ma, Yanxia Bi, Jinfang Feng, Rong Xiao

**Study Type** : Animal Study

**Additional Links**

**Substances** : Folic Acid : CK(643) : AC(93), Genistein : CK(515) : AC(228)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Genistein exhibits neuroprotective properties in a experimental model of beta-amyloid peptide induced toxicity.

**Pubmed Data** : Int J Dev Neurosci. 2010 Jun;28(4):289-95. Epub 2010 Apr 1. PMID: [20362658](#)

**Article Published Date** : Jun 01, 2010

**Authors** : Weiwei Ma, Linhong Yuan, Huanling Yu, Bingjie Ding, Yuandi Xi, Jinfang Feng, Rong Xiao

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Genistein : CK(515) : AC(228)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Apoptotic : CK(2941) : AC(2062), Neuroprotective Agents : CK(2235) : AC(1052)

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## Genistein is neuroprotective in murine models of familial amyotrophic lateral sclerosis and stroke.

**Pubmed Data** : Biochem Biophys Res Commun. 1999 May 19;258(3):685-8. PMID: [10329446](#)

**Article Published Date** : May 19, 1999

**Authors** : V N Trieu, F M Uckun

**Study Type** : Animal Study

**Additional Links**

**Substances** : Genistein : CK(515) : AC(228), phytoestrogens : CK(777) : AC(263)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Stroke : CK(1322) : AC(163), Stroke: Attenuation/Recovery : CK(345) : AC(74)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## The present review aims to describe, compare, and discuss relevant data about the effects of genistein upon mitochondria.

**Pubmed Data** : Mitochondrion. 2016 May 17 ;29:35-44. Epub 2016 May 17. PMID: [27223841](#)

**Article Published Date** : May 16, 2016

**Authors** : Marcos Roberto de Oliveira

**Study Type** : Review

**Additional Links**

**Substances** : Genistein : CK(515) : AC(228)

**Diseases** : Cancers: All : CK(14297) : AC(4542) , Cardiovascular Diseases : CK(7018) : AC(887) , Neurodegenerative Diseases : CK(3370) : AC(846)

## Ginger (AC 5) (CK 8)

### 6-gingerol may be useful in the prevention and treatment of alzheimer's disease.

**Pubmed Data** : Rejuvenation Res. 2015 Mar 26. Epub 2015 Mar 26. PMID: [25811848](#)

**Article Published Date** : Mar 25, 2015

**Authors** : Gao-Feng Zeng, Shao-Hui Zong, Zhi-Yong Zhang, Song-Wen Fu, Ke-Ke Li, Ye Fang, Li Lu, De-Qiang Xiao

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ginger : CK(676) : AC(175) , Gingerol : CK(53) : AC(31)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052) , Nitric Oxide Inhibitor : CK(223) : AC(108)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

### A combination of ginger and peony root may prevent memory impairment in AD by inhibiting A $\beta$ accumulation and inflammation in the brain.

**Pubmed Data** : J Alzheimers Dis. 2015 Nov 30. Epub 2015 Nov 30. PMID: [26639976](#)

**Article Published Date** : Nov 29, 2015

**Authors** : Soonmin Lim, Jin Gyu Choi, Minho Moon, Hyo Geun Kim, Wonil Lee, Hyoung-Rok Bak, Hachang Sung, Chi Hye Park, Sun Yeou Kim, Myung Sook Oh

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Ginger](#) : CK(676) : AC(175) , [Peony](#) : CK(50) : AC(14)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Brain Inflammation](#) : CK(246) : AC(140)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574) , [Cyclooxygenase 2 Inhibitors](#) : CK(448) : AC(267)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Ginger inhibits micoglia cell activation associated with brain inflammation.

**Pubmed Data** : Food Chem Toxicol. 2009 Jun;47(6):1190-7. Epub 2009 Feb 20. PMID: [19233241](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Hyo Won Jung, Cheol-Ho Yoon, Kwon Moo Park, Hyung Soo Han, Yong-Ki Park

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ginger](#) : CK(676) : AC(175)

**Diseases** : [Brain: Microglial Activation](#) : CK(82) : AC(53) , [Brain Inflammation](#) : CK(246) : AC(140) , [Inflammation](#) : CK(2863) : AC(839) , [Lipopolysaccharide-Induced Toxicity](#) : CK(357) : AC(216) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Cyclooxygenase 2 Inhibitors](#) : CK(448) : AC(267) , [NF-kappaB Inhibitor](#) : CK(1100) : AC(686) , [Nitric Oxide Inhibitor](#) : CK(223) : AC(108) , [Prostaglandin Antagonists](#) : CK(27) : AC(13)

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## Long-term consumption of aromatic compounds from spices could be effective in the prevention of Alzheimer's disease.

**Pubmed Data** : Nat Prod Commun. 2016 Apr ;11(4):507-10. PMID: [27396206](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Shinichi Matsumura, Kazuya Murata, Yuri Yoshioka, Hideaki Matsuda

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Cardamom](#) : CK(39) : AC(9) , [Cinnamon](#) : CK(243) : AC(88) , [Ginger](#) : CK(676) : AC(175) , [Long Pepper](#) : CK(14) : AC(8) , [Turmeric](#) : CK(4951) : AC(2343)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053) , [β-secretase Inhibitor](#) : CK(1) : AC(1)

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## Nutraceuticals derived from such spices as turmeric, red pepper, black pepper, licorice, clove, ginger, garlic,

## coriander, and cinnamon target inflammatory pathways, thereby preventing neurodegenerative diseases.

**Pubmed Data** : Mol Neurobiol. 2011 Oct ;44(2):142-59. Epub 2011 Mar 1. PMID: [21360003](#)

**Article Published Date** : Oct 01, 2011

**Authors** : Ramaswamy Kannappan, Subash Chandra Gupta, Ji Hye Kim, Simone Reuter, Bharat Bhushan Aggarwal

**Study Type** : Review

### Additional Links

**Substances** : Black Pepper : CK(229) : AC(96), Cinnamon : CK(243) : AC(88), Clove : CK(104) : AC(55), Coriander : CK(1) : AC(1), Garlic : CK(712) : AC(225), Ginger : CK(676) : AC(175), Licorice : CK(345) : AC(110), Red Pepper : CK(4) : AC(2)

**Diseases** : Inflammation : CK(2863) : AC(839), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Gingerol (AC 1) (CK 2)

### 6-gingerol may be useful in the prevention and treatment of alzheimer's disease.

**Pubmed Data** : Rejuvenation Res. 2015 Mar 26. Epub 2015 Mar 26. PMID: [25811848](#)

**Article Published Date** : Mar 25, 2015

**Authors** : Gao-Feng Zeng, Shao-Hui Zong, Zhi-Yong Zhang, Song-Wen Fu, Ke-Ke Li, Ye Fang, Li Lu, De-Qiang Xiao

**Study Type** : Animal Study

### Additional Links

**Substances** : Ginger : CK(676) : AC(175), Gingerol : CK(53) : AC(31)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052), Nitric Oxide Inhibitor : CK(223) : AC(108)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Ginkgo biloba (AC 23) (CK 178)

# A review of the current perspectives on the beneficial role of Ginkgo biloba in neurological and cerebrovascular disorders

**Pubmed Data** : Integr Med Insights. 2015;10:1-9. Epub 2015 Nov 9. PMID: [26604665](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Kevin M Nash, Zahoor A Shah

**Study Type** : Review

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurologic Disorders](#) : CK(65) : AC(29) , [Stroke: Ischemic](#) : CK(182) : AC(25)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Ginkgo biloba compares favorably to the drug Aricept (donepezil) for the treatment of Alzheimer's dementia.

**Pubmed Data** : Eur J Neurol. 2006 Sep;13(9):981-5. PMID: [16930364](#)

**Article Published Date** : Sep 01, 2006

**Authors** : M Mazza, A Capuano, P Bria, S Mazza

**Study Type** : Human Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161) , [Piperidines](#) : CK(59) : AC(22)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Dementia](#) : CK(571) : AC(79)

**Additional Keywords** : [Donepezil Alternatives](#) : CK(20) : AC(2) , [Natural Substances Versus Drugs](#) : CK(1694) : AC(300) , [Plant Extracts](#) : CK(7290) : AC(2420)

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## Ginkgo biloba compares favorably to the drug donepezil in the treatment of dementia.

**Pubmed Data** : Fortschr Neurol Psychiatr. 2009 Sep;77(9):494-506. Epub 2009 Jul 20. PMID: [19621278](#)

**Article Published Date** : Sep 01, 2009

**Authors** : S Kasper, H Schubert

**Study Type** : Human Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Cardiovascular Agents](#) : CK(160) : AC(24)

**Additional Keywords** : [Donepezil Alternatives](#) : CK(20) : AC(2) , [Natural Substances Versus Drugs](#) : CK(1694) : AC(300) , [Plant Extracts](#) : CK(7290) : AC(2420)

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## Ginkgo biloba has a gender-specific neuroprotective effect in a transgenic mouse model of ALS.

**Pubmed Data** : J Mol Neurosci. 2001 Aug;17(1):89-96. PMID: [11665866](#)

**Article Published Date** : Aug 01, 2001

**Authors** : R J Ferrante, A M Klein, A Dedeoglu, M F Beal

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## Ginkgo biloba and red clover in combination was more effective as protective agents compared to each one of them alone.

**Pubmed Data** : Food Chem Toxicol. 2016 Aug ;94:112-27. Epub 2016 May 24. PMID: [27234133](#)

**Article Published Date** : Jul 31, 2016

**Authors** : Heba M Abdou, Mokhtar I Yousef, Desouki A El Mekkawy, Ahmed S Al-Shami

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161), [Red Clover](#) : CK(40) : AC(11)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Prophylactic Agents](#) : CK(129) : AC(31)

**Additional Keywords** : [Natural Substance Synergy](#) : CK(534) : AC(244)

**Problem Substances** : [Arsenite](#) : CK(9) : AC(6)

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## Ginkgo biloba and/or a multivitamin-multimineral supplement effected remarkable improvement in symptoms in this case report.

**Pubmed Data** : Glob Adv Health Med. 2014 Jul ;3(4):43-4. PMID: [25105077](#)

**Article Published Date** : Jun 30, 2014

**Authors** : Gary D Conrad

**Study Type** : Human: Case Report

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161), [Multivitamin](#) : CK(257) : AC(25)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163), [Parkinsonian Disorders](#) : CK(15) : AC(4)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

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## Ginkgo biloba appears more effective than placebo.

**Pubmed Data** : BMC Geriatr. 2010 ;10:14. Epub 2010 Mar 17. PMID: [20236541](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Stefan Weinmann, Stephanie Roll, Christoph Schwarzbach, Christoph Vauth, Stefan N Willich

**Study Type** : Meta Analysis

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Additional Keywords** : [Plant Extracts](#) : CK(7290) : AC(2420)

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## Ginkgo biloba extract can modulate tPA activity under basal and glutamate-stimulated conditions by both translational and transcriptional mechanisms.

**Pubmed Data** : Phytother Res. 2016 Jan ;30(1):58-65. Epub 2015 Oct 19. PMID: [26478151](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Kyu Suk Cho, Ian Myungwon Lee, Seobo Sim, Eun Joo Lee, Edson Luck Gonzales, Jong Hoon Ryu, Jae Hoon Cheong, Chan Young Shin, Kyoung Ja Kwon, Seol-Heui Han

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(798) : AC(162)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuromodulatory](#) : CK(2) : AC(1)

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## Ginkgo biloba extract improves cognitive function and regulates inflammatory responses in the APP/PS1 mouse.

**Pubmed Data** : Exp Gerontol. 2016 Aug ;81:92-100. Epub 2016 May 22. PMID: [27220811](#)

**Article Published Date** : Jul 31, 2016

**Authors** : Wenbin Wan, Chunyan Zhang, Mark Danielsen, Qianlei Li, Wenjing Chen, Yuanjin Chan, Yaming Li

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Brain Inflammation](#) : CK(246) : AC(140)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Ginkgo biloba extract may attenuate the neurotoxic

## effects of levodopa in parkinson disease.

**Pubmed Data** : J Huazhong Univ Sci Technolog Med Sci. 2003;23(2):151-3. PMID: [12973934](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Fei Cao, Shenggang Sun, E-tang Tong

**Study Type** : Human Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Ginkgo biloba extract may improve dementia with neuropsychiatric features.

**Pubmed Data** : J Neurol Sci. 2010 Sep 11. Epub 2010 Sep 11. PMID: [20837354](#)

**Article Published Date** : Sep 11, 2010

**Authors** : R Ihl, M Tribanek, N Bachinskaya

**Study Type** : Human Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(798) : AC(162)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

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## Ginkgo biloba improves cognitive functioning and behavioral symptoms in patients with age-associated cognitive impairment or dementia.

**Pubmed Data** : Arzneimittelforschung. 2007;57(1):4-11. PMID: [17341003](#)

**Article Published Date** : Jan 01, 2007

**Authors** : Oleksandr Napryeyenko, Irina Borzenko,

**Study Type** : Human Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Aging: Brain](#) : CK(246) : AC(84), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79)

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## Ginkgo biloba is as effective as the drug donepezil (Aricept) in improving symptoms of Alzheimers, but with less side effects.

**Pubmed Data** : Aging Ment Health. 2009 Mar;13(2):183-90. PMID: [19347685](#)

**Article Published Date** : Mar 01, 2009

**Authors** : S Yancheva, R Ihl, G Nikolova, P Panayotov, S Schlaefke, R Hoerr,

**Study Type** : Human Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Additional Keywords** : [Superiority of Natural Substances versus Drugs](#) : CK(1304) : AC(249)

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## Ginkgo biloba is potentially beneficial for the improvement of cognitive function in patients with mild cognitive impairment or Alzheimer's disease.

**Pubmed Data** : Curr Top Med Chem. 2016 ;16(5):520-8. PMID: [26268332](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Guoyan Yang, Yuyi Wang, Jin Sun, Kang Zhang, Jianping Liu

**Study Type** : Meta Analysis, Review

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Ginkgolide A, B, and huperzine A inhibit nitric oxide-induced neurotoxicity.

**Pubmed Data** : Int Immunopharmacol. 2002 Oct;2(11):1551-6. PMID: [12433056](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Hong-Wei Zhao, Xiao-Yu Li

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161), [Huperzine](#) : CK(44) : AC(24)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201), [Antiproliferative](#) : CK(2461) : AC(1673), [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Long-term treatment with EGb 761 may reduce cerebral A $\beta$ pathology by inhibiting $\beta$ -secretase activity and A $\beta$ aggregation.

**Pubmed Data** : Brain Behav Immun. 2015 May ;46:121-31. Epub 2015 Jan 28. PMID: [25637484](#)

**Article Published Date** : Apr 30, 2015

**Authors** : Xu Liu, Wenlin Hao, Yiren Qin, Yann Decker, Xuan Wang, Martin Burkart, Karl Schötz, Michael D Menger, Klaus Fassbender, Yang Liu

**Study Type** : Transgenic Animal Study

### Additional Links

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Interleukin-1 beta downregulation](#) : CK(452) : AC(199), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1752) : AC(641)

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## Meta-analytic findings suggested overall benefits of EGb 761 for stabilizing or slowing decline in cognition of subjects with cognitive impairment and dementia.

**Pubmed Data** : [J Alzheimers Dis. 2015 ;43\(2\):605-11. PMID: 25352453](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Vincenzo Solfrizzi, Francesco Panza

**Study Type** : Meta Analysis

### Additional Links

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419), [Significant Treatment Outcome](#) : CK(3028) : AC(365)

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## Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : [Clin Nutr. 2009 Dec;28\(6\):604-17. Epub 2009 Sep 25. PMID: 19782443](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Barkha P Patel, Mazen J Hamadeh

**Study Type** : Commentary

### Additional Links

**Substances** : [Alpha-Lipoic Acid](#) : CK(462) : AC(106), [Carnitine](#) : CK(434) : AC(66), [Coenzyme Q10](#) : CK(941) : AC(140), [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312), [Folic Acid](#) : CK(643) : AC(93), [Ginkgo biloba](#) : CK(796) : AC(161), [Melatonin](#) : CK(946) : AC(304), [Red Wine Extract](#) : CK(114) : AC(32), [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## Taking a 240-mg daily dose of Ginkgo biloba extract is effective and safe in the treatment of dementia.

**Pubmed Data** : [J Pharm Health Care Sci. 2015 ;1:14. Epub 2015 Apr 10. PMID: 26819725](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Masayuki Hashiguchi, Yuriko Ohta, Mikiko Shimizu, Junya Maruyama, Mayumi Mochizuki

**Study Type :** Meta Analysis

**Additional Links**

**Substances :** [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases :** [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords :** [Plant Extracts](#) : CK(7288) : AC(2419)

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**The present review discusses the mitochondrial restorative mechanisms of these bioenergetics and antioxidants as a potential alternative drug strategy for effective management of AD.**

**Pubmed Data :** [Front Pharmacol. 2015 ;6:206. Epub 2015 Sep 24. PMID: 26441662](#)

**Article Published Date :** Dec 31, 2014

**Authors :** Anil Kumar, Arti Singh

**Study Type :** Review

**Additional Links**

**Substances :** [Curcumin](#) : CK(4128) : AC(2171), [Ginkgo biloba](#) : CK(796) : AC(161), [Omega-3 Fatty Acids](#) : CK(3268) : AC(387)

**Diseases :** [Alzheimer's Disease](#) : CK(1282) : AC(375), [Mitochondrial Dysfunction](#) : CK(224) : AC(90), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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**The results confirm the efficacy of the three herbal active substances in elderly patients with anxiety, depression, and dementia.**

**Pubmed Data :** [Wien Med Wochenschr. 2015 Jun 20. Epub 2015 Jun 20. PMID: 26092515](#)

**Article Published Date :** Jun 19, 2015

**Authors :** Siegfried Kasper

**Study Type :** Meta Analysis

**Additional Links**

**Substances :** [Ginkgo biloba](#) : CK(796) : AC(161), [Lavender: Essential Oil](#) : CK(176) : AC(20), [Lavender: Essential Oil](#) : CK(176) : AC(20)

**Diseases :** [Anxiety Disorders](#) : CK(1215) : AC(180), [Dementia](#) : CK(571) : AC(79), [Depression](#) : CK(1820) : AC(263)

**Pharmacological Actions :** [Antidepressive Agents](#) : CK(986) : AC(157)

**Additional Keywords :** [Natural Substances Versus Drugs](#) : CK(1694) : AC(300), [Plant Extracts](#) : CK(7288) : AC(2419)

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**This data supports the use of Ginkgo biloba in patients with dementia and as an adjunctive therapy in**

## schizophrenic patients.

**Pubmed Data** : Evid Based Complement Alternat Med. 2013 ;2013:915691. Epub 2013 May 28. PMID: [23781271](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Natascia Brondino, Annalisa De Silvestri, Simona Re, Niccolò Lanati, Pia Thiemann, Anna Verna, Enzo Emanuele, Pierluigi Politi

**Study Type** : Review

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Dementia](#) : CK(571) : AC(79), [Psychiatric Disorders](#) : CK(110) : AC(27), [Schizophrenia](#) : CK(434) : AC(68)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**This study presents findings from a new point of view to improve therapeutic potential for AD via the synergistic neuroprotective role played by APE1 in combination with the phytochemical GB.**

**Pubmed Data** : J Neurosci Res. 2015 Jun ;93(6):938-47. Epub 2015 Feb 9. PMID: [25677400](#)

**Article Published Date** : May 31, 2015

**Authors** : Navrattan Kaur, Monisha Dhiman, J Regino Perez-Polo, Anil K Mantha

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [DNA Repair Up-regulation](#) : CK(67) : AC(16), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Ginseng (American) (AC 1) (CK 2)

**American Ginseng has a neuroprotective effect in the rodent model of neurodegeneration.**

**Pubmed Data** : Ann Neurol. 2005 May;57(5):642-8. PMID: [15852378](#)

**Article Published Date** : May 01, 2005

**Authors** : Xiao-Yuan Lian, Zhizhen Zhang, Janet L Stringer

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Ginseng \(American\)](#) : CK(133) : AC(33)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Ginseng (Siberian) (AC 1) (CK 1)

### Eleutherococcus senticosus protects against amyloid beta-induced nerve damage.

**Pubmed Data** : J Pharmacol Sci. 2008 Jul;107(3):329-39. Epub 2008 Jul 8. PMID: [18612196](#)

**Article Published Date** : Jul 01, 2008

**Authors** : Chihiro Tohda, Mahoko Ichimura, Yanjing Bai, Ken Tanaka, Shu Zhu, Katsuko Komatsu

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Ginseng \(Siberian\)](#) : CK(88) : AC(20)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

---

## Ginsenosides (AC 4) (CK 6)

### Ginsenoside has an anti-neuroinflammation effect in a rat model of Alzheimer disease.

**Pubmed Data** : Neurosci Lett. 2011 Jan 3;487(1):70-2. Epub 2010 Oct 7. PMID: [20933058](#)

**Article Published Date** : Jan 03, 2011

**Authors** : Yulin Wang, Jing Liu, Zhongmin Zhang, Pengxiang Bi, Zhiguo Qi, Chaodong Zhang

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Ginsenosides](#) : CK(69) : AC(28)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Brain Inflammation](#) : CK(246) : AC(140)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Ginsenoside-Rg1 has neuroprotective effects in primary nigral neurons against rotenone.

**Pubmed Data** : Neuropharmacology. 2007 Mar;52(3):827-35. Epub 2006 Nov 22. PMID: [17123556](#)

**Article Published Date** : Mar 01, 2007

**Authors** : K W Leung, K K L Yung, N K Mak, Y S Chan, T P Fan, R N S Wong

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ginsenosides : CK(69) : AC(28)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Pesticide Toxicity : CK(188) : AC(59)

**Pharmacological Actions** : Enzyme Inhibitors : CK(463) : AC(250), Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Chemical: Rotenone : CK(1) : AC(1)

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## Saponins extracted from Panax notoginseng protect against herbicide induced neurotoxicity.

**Pubmed Data** : J Ethnopharmacol. 2010 Feb 3;127(2):419-23. Epub 2009 Oct 24. PMID: [19857566](#)

**Article Published Date** : Feb 03, 2010

**Authors** : Fu-Cheng Luo, Sheng-Dong Wang, Kui Li, Hajime Nakamura, Junji Yodoi, Jie Bai

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ginsenosides : CK(69) : AC(28), Panax Notoginseng : CK(42) : AC(9)

**Diseases** : Herbicide Toxicity : CK(4) : AC(2), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## This reviews the neuroprotective roles of these herbs and summarizes their anti-inflammatory, antioxidant, and anti-apoptotic effects in PD.

**Pubmed Data** : Am J Transl Res. 2015 ;7(7):1189-202. Epub 2015 Jul 15. PMID: [26328004](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Wenyu Fu, Wenxin Zhuang, Shuanhu Zhou, Xin Wang

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Ginsenosides : CK(69) : AC(28), Resveratrol : CK(1232) : AC(737)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Glutathione (AC 3) (CK 12)

### A dietary reduction in glutathione precursors, e.g. glutamate, cysteine and sulfite, as well as glutathione supplementation may benefit patients with ALS

**Pubmed Data** : J Altern Complement Med. 2008 Nov;14(9):1159-64. PMID: [18973429](#)

**Article Published Date** : Nov 01, 2008

**Authors** : Patricia B E Woolsey

**Study Type** : Commentary

**Additional Links**

**Substances** : [Glutathione](#) : CK(61) : AC(16)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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### Selenium, glutathione, copper/zinc and superoxide dismutase may have therapeutic value in ALS.

**Pubmed Data** : Scand J Rheumatol. 1995;24(2):85-93. PMID: [9726810](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Apostolski, Z Marinković, A Nikolić, D Blagojević, M B Spasić, A M Michelson

**Study Type** : Human Study

**Additional Links**

**Substances** : [Antioxidant formulas](#) : CK(492) : AC(76), [Copper](#) : CK(83) : AC(17), [Glutathione](#) : CK(61) : AC(16), [Selenium](#) : CK(784) : AC(139), [Superoxide dismutase](#) : CK(16) : AC(5), [Zinc](#) : CK(941) : AC(139)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Calcium Channel Blockers](#) : CK(87) : AC(23)

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### The antioxidants glutathione and ascorbic acid increase the survival of dopaminergic grafts in the rat model of Parkinson's disease

**Pubmed Data** : J Chem Neuroanat. 2004 Dec;28(4):253-64. PMID: [15531136](#)

**Article Published Date** : Dec 01, 2004

**Authors** : A K Agrawal, R K Chaturvedi, S Shukla, K Seth, S Chauhan, A Ahmad, P K Seth

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Glutathione](#) : CK(61) : AC(16), [Vitamin C](#) : CK(1953) : AC(401)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

## GlyceroPhosphoCholine (alpha-GPC) (AC 1) (CK 10)

**Alpha-GPC improves cognitive function in mild to moderate Alzheimer's dementia.**

**Pubmed Data** : Clin Ther. 2003 Jan;25(1):178-93. PMID: [12637119](#)

**Article Published Date** : Jan 01, 2003

**Authors** : Maria De Jesus Moreno Moreno

**Study Type** : Human Study

**Additional Links**

**Substances** : [GlyceroPhosphoCholine \(alpha-GPC\)](#) : CK(12) : AC(7)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

---

## Glycoaminoglycans (AC 4) (CK 8)

**Co-administration of IGF-I and glycosaminoglycans greatly delays motor neuron disease in the mouse model.**

**Pubmed Data** : J Neurochem. 2002 Apr;81(1):194-202. PMID: [12067233](#)

**Article Published Date** : Apr 01, 2002

**Authors** : Alfredo Gorio, Elena Lesma, Laura Madaschi, Anna Maria Di Giulio

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Glycoaminoglycans](#) : CK(8) : AC(4), [Insulin-like Growth Factor \(IGF-1\)](#) : CK(9) : AC(5)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140), [Motor Neuron Disease](#) : CK(464) : AC(102)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

---

## Glycoaminoglycans have neurotrophic and neuroregenerative effects in a mouse model of motor neuron disease.

**Pubmed Data** : J Neurosci Res. 1998 Mar 1;51(5):559-62. PMID: [9511999](#)

**Article Published Date** : Mar 01, 1998

**Authors** : A Gorio, L Vergani, E Lesma, A M Di Giulio

**Study Type** : Animal Study

**Additional Links**

**Substances** : Glycoaminoglycans : CK(8) : AC(4)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Motor Neuron Disease : CK(464) : AC(102)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Glycosaminoglycans boost insulin-like growth factor-I-promoted neuroprotection, indicating their potential value in motor neuron disease and peripheral neuropathies.

**Pubmed Data** : Neuroscience. 1999;93(2):565-72. PMID: [10465440](#)

**Article Published Date** : Jan 01, 1999

**Authors** : L Vergani, M Losa, E Lesma, A M Di Giulio, A Torsello, E E Müller, A Gorio

**Study Type** : Animal Study

**Additional Links**

**Substances** : Glycoaminoglycans : CK(8) : AC(4) , Insulin-like Growth Factor (IGF-1) : CK(9) : AC(5)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Motor Neuron Disease : CK(464) : AC(102), Peripheral Neuropathies : CK(214) : AC(35)

**Pharmacological Actions** : Apoptotic : CK(2941) : AC(2062) , Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Drug Synergy : CK(351) : AC(156)

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## Glycosaminoglycans co-administration enhance insulin-like growth factor-I neuroprotective and neuroregenerative activity in traumatic and genetic models of motor neuron disease.

**Pubmed Data** : Int J Dev Neurosci. 2000 Jul-Aug;18(4-5):339-46. PMID: [10817918](#)

**Article Published Date** : Jul 01, 2000

**Authors** : A M Di Giulio, E Germani, E Lesma, E Muller, A Gorio

**Study Type** : Animal Study

#### Additional Links

**Substances** : Glycoaminoglycans : CK(8) : AC(4) , Insulin-like Growth Factor (IGF-1) : CK(9) : AC(5)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Motor Neuron Disease : CK(464) : AC(102)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053) , Neurorestorative : CK(71) : AC(21)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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## Goji (AC 4) (CK 5)

### Goji (lycopom barbarum) exhibits a neuroprotective effect against beta-amyloid peptide neurotoxicity.

**Pubmed Data** : Exp Gerontol. 2005 Aug-Sep;40(8-9):716-27 PMID: [16139464](#)

**Article Published Date** : Aug 01, 2005

**Authors** : Man-Shan Yu, Sarana Ka-Yan Leung, Sau-Wan Lai, Chi-Ming Che, Sze-Yong Zee, Kwok-Fai So, Wai-Hung Yuen, Raymond Chuen-Chung Chang

**Study Type** : Animal Study

#### Additional Links

**Substances** : Goji : CK(71) : AC(28)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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### Goji berry polysaccharide is a promising neuronal protector with potent ameliorative effects on key pathological events.

**Pubmed Data** : Neuromolecular Med. 2016 Mar 31. Epub 2016 Mar 31. PMID: [27033360](#)

**Article Published Date** : Mar 30, 2016

**Authors** : Xiwen Xing, Fenyong Liu, Jia Xiao, Kwok Fai So

**Study Type** : Review

#### Additional Links

**Substances** : Goji : CK(71) : AC(28)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain: Oxidative Stress : CK(75) : AC(44) , Brain Inflammation : CK(246) : AC(140) , Parkinson's Disease : CK(525) : AC(163) , Spinal Cord Injuries : CK(137) : AC(45) , Stroke: Attenuation/Recovery : CK(345) : AC(74)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201) , Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Goji has neuroprotective properties against homocysteine-induced toxicity in rat cortical neurons.

**Pubmed Data** : J Alzheimers Dis. 2010;19(3):813-27. PMID: [20157238](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Yuen-Shan Ho, Man-Shan Yu, Xi-Fei Yang, Kwok-Fai So, Wai-Hung Yuen, Raymond Chuen-Chung Chang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Goji](#) : CK(71) : AC(28)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [High Homocysteine](#) : CK(431) : AC(63)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062), [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Polysaccharides from wolfberry (goji) antagonizes glutamate excitotoxicity in rat cortical neurons.

**Pubmed Data** : CNS Spectr. 1999 Dec;4(12):34-47. PMID: [19499323](#)

**Article Published Date** : Dec 01, 1999

**Authors** : Yuen-Shan Ho, Man-Shan Yu, Suet-Yi Yik, Kwok-Fai So, Wai-Hung Yuen, Raymond Chuen-Chung Chang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Goji](#) : CK(71) : AC(28)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Excitotoxicity](#) : CK(58) : AC(35)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Gotu Kola (AC 2) (CK 2)

### Asiatic acid possessed antioxidant, mitoprotective and anti-apoptotic properties.

**Pubmed Data** : Nutr Neurosci. 2016 Feb 9. Epub 2016 Feb 9. PMID: [26856988](#)

**Article Published Date** : Feb 08, 2016

**Authors** : Jagatheesan Nataraj, Thamilarasan Manivasagam, Arokiasamy Justin Thenmozhi, Musthafa Mohamed Essa

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Gotu Kola](#) : CK(50) : AC(20)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201), [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Asiatic acid, a compound found within Gotu Kola, protects against pesticide and H2O2-induced cytotoxicity.

**Pubmed Data** : [Neurochem Res. 2009 Apr;34\(4\):746-54. Epub 2008 Sep 19. PMID: 18802751](#)

**Article Published Date** : Apr 01, 2009

**Authors** : Yuyun Xiong, Hongqun Ding, Minfang Xu, Jing Gao

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Gotu Kola](#) : CK(50) : AC(20)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163), [Pesticide Toxicity](#) : CK(188) : AC(59)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Grape (AC 1) (CK 2)

## Non-polyphenolic compounds of a dried grape (Maviz) inhibited memory impairments induced by beta-amyloid peptide.

**Pubmed Data** : [Nutr Neurosci. 2016 May 24;1-9. Epub 2016 May 24. PMID: 27219682](#)

**Article Published Date** : May 23, 2016

**Authors** : Elnaz Bakhtiyari, Mohammad Mahdi Ahmadian-Attari, Peyman Salehi, Behzad Khallaghi, Leila Dargahi, Zahurin Mohamed, Mohammad Kamalinejad, Abolhassan Ahmadiani

**Study Type** : Animal Study

#### Additional Links

**Substances** : [Grape](#) : CK(1720) : AC(430)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Pharmacological Actions** : [Catalase Up-Regulation](#) : CK(118) : AC(42), [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Grape Seed Extract (AC 2) (CK 4)

### Grape seed extract exhibits preventive and/or therapeutic potential in an animal model of Alzheimer's disease.

**Pubmed Data** : J Alzheimers Dis. 2011 Jul 8. Epub 2011 Jul 8. PMID: [21743132](#)

**Article Published Date** : Jul 08, 2011

**Authors** : Peng Liu, Lisa J Kemper, Jun Wang, Kathleen R Zahs, Karen H Ashe, Giulio M Pasinetti

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Grape Seed Extract](#) : CK(278) : AC(81)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053) , [Neurorestorative](#) : CK(71) : AC(21)

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### Grape seed extract has a rejuvenating effect in the central nervous system of aged rats.

**Pubmed Data** : Neurosci Lett. 2005 Aug 5;383(3):295-300. PMID: [15955424](#)

**Article Published Date** : Aug 05, 2005

**Authors** : Muthaiya Balu, Purushotham Sangeetha, Dayalan Haripriya, Chinnakannu Panneerselvam

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Grape Seed Extract](#) : CK(278) : AC(81)

**Diseases** : [Aging: Brain](#) : CK(246) : AC(84), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

---

## Grapefruit Seed Extract (AC 1) (CK 2)

### Grape seed polyphenols and curcumin reduce genomic

## instability events in a transgenic mouse model for Alzheimer's disease.

**Pubmed Data** : Mutat Res. 2009 Feb 10;661(1-2):25-34. Epub 2008 Nov 6. PMID: [19027755](#)

**Article Published Date** : Feb 10, 2009

**Authors** : Philip Thomas, Yan-Jiang Wang, Jin-Hua Zhong, Shantha Kosaraju, Nathan J O'Callaghan, Xin-Fu Zhou, Michael Fenech

**Study Type** : Animal Study

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171), Flavonoids : CK(1194) : AC(376), Grapefruit Seed Extract : CK(37) : AC(14), Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Genoprotective : CK(259) : AC(95), Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Grapes (AC 1) (CK 1)

**Whole-grape products are safer choices for better health and disease prevention. But for advanced disease conditions, individual grape ingredients or combinations appear to be better.**

**Pubmed Data** : Ann N Y Acad Sci. 2015 Jun 22. Epub 2015 Jun 22. PMID: [26099945](#)

**Article Published Date** : Jun 21, 2015

**Authors** : Chandra K Singh, Xiaoqi Liu, Nihal Ahmad

**Study Type** : Commentary

### Additional Links

**Substances** : Anthocyanins : CK(332) : AC(114), Catechin : CK(512) : AC(169), Flavonoids : CK(1194) : AC(376), Grapes : CK(26) : AC(7), Polyphenols : CK(920) : AC(333), Resveratrol : CK(1232) : AC(737)

**Diseases** : Cancers: All : CK(14297) : AC(4542), Neurodegenerative Diseases : CK(3370) : AC(846)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Natural Substance Synergy : CK(534) : AC(244)

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## Green Coffee Bean (AC 1) (CK 10)

### Coffee fruit extract increases plasma levels of brain-derived neurotrophic factor in healthy subjects.

**Pubmed Data** : Br J Nutr. 2013 Jan 14:1-6. Epub 2013 Jan 14. PMID: [23312069](#)

**Article Published Date** : Jan 13, 2013

**Authors** : Tania Reyes-Izquierdo, Boris Nemzer, Cynthia Shu, Lan Huynh, Ruby Argumedo, Robert Keller, Zb Pietrzkowski

**Study Type** : Human Study

#### Additional Links

**Substances** : [Green Coffee Bean](#) : CK(62) : AC(12)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuritogenic](#) : CK(133) : AC(59)

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## Green Tea (AC 8) (CK 18)

### Antioxidant beverages could be used as a natural complementary therapy to alleviate or decrease oxidative stress in Alzheimer's disease.

**Pubmed Data** : Eur J Nutr. 2015 Aug 23. Epub 2015 Aug 23. PMID: [26298312](#)

**Article Published Date** : Aug 22, 2015

**Authors** : Jose M Rubio-Perez, Maria D Albaladejo, Pilar Zafrilla, Maria L Vidal-Guevara, Juana M Morillas-Ruiz

**Study Type** : Human Study

#### Additional Links

**Substances** : [Apples](#) : CK(373) : AC(99), [Green Tea](#) : CK(1934) : AC(549)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630)

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### Green tea extracts reversed the striatal oxidative stress and immunohistochemistry alterations in rats.

**Pubmed Data** : Evid Based Complement Alternat Med. 2015 ;2015:161092. Epub 2015 Jun 18.  
PMID: [26167188](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Natália Bitu Pinto, Bruno da Silva Alexandre, Kelly Rose Tavares Neves, Aline Holanda Silva, Luzia Kalyne A M Leal, Glauce S B Viana

**Study Type** : Animal Study

**Additional Links**

**Substances** : Catechin : CK(512) : AC(169), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) ,  
Green Tea : CK(1934) : AC(549)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357) ,  
Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants :  
CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Green tea inhibits beta-amyloid induced cell death.

**Pubmed Data** : Brain Res Mol Brain Res. 2005 Oct 31;140(1-2):45-54. Epub 2005 Sep 8. PMID:  
[16153742](#)

**Article Published Date** : Oct 31, 2005

**Authors** : Sun Young Lee, Jae Woong Lee, Heesoon Lee, Han Soo Yoo, Yeo Pyo Yun, Ki Wan Oh,  
Tae Youl Ha, Jin Tae Hong

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Green Tea : CK(1934) : AC(549)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Antioxidants : CK(7192) : AC(2631) ,  
Neuroprotective Agents : CK(2235) : AC(1052) , NF-kappaB Inhibitor : CK(1100) : AC(686)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Long-term drinking of tea may be one of the effective strategies for the deceleration of the progression of degenerative disorders.

**Pubmed Data** : PLoS One. 2016;11(3):e0152064. Epub 2016 Mar 31. PMID: [27030967](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Shuxian Cai, Heng Yang, Kewu Zeng, Jing Zhang, Ni Zhong, Yingzi Wang, Jing Ye, Pengfei Tu, Zhonghua Liu

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Green Tea : CK(1934) : AC(549)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Polyphenols such as curcumin and EGCG from green tea may chelate out iron from the Alzheimers brain.

**Pubmed Data** : Prog Neurobiol. 2007 Aug;82(6):348-60. Epub 2007 Jun 19. PMID: [17659826](#)

**Article Published Date** : Aug 01, 2007

**Authors** : Silvia Mandel, Tamar Amit, Orit Bar-Am, Moussa B H Youdim

**Study Type** : Commentary

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Iron Overload : CK(31) : AC(17)

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## Tea polyphenols inhibit AChE as well as BChE and enhance the cholinergic neurotransmission by prolonging the time.

**Pubmed Data** : CNS Neurol Disord Drug Targets. 2016 Mar 21. Epub 2016 Mar 21. PMID: [26996169](#)

**Article Published Date** : Mar 20, 2016

**Authors** : Babar Ali, Qazi Mohammad Sajid Jamal, Saiba Sams, Naser A Al-Wabel, Mughees Uddin Siddiqui, Mohammad A Alzohairy, Mohammed A Al Karaawi, Kavindra Kumar Kesari, Gohar Mushtaq, Mohammad A Kamal

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Green Tea : CK(1934) : AC(549)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Pharmacological Actions** : Acetylcholinesterase Inhibitor : CK(36) : AC(18), Cholinesterase Inhibitors : CK(5) : AC(4)

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## The present review addresses how these tea constituents work at the cellular level to render effective control of disease syndromes and suggests that tea synergizes with established drugs.

**Pubmed Data** : Neurochem Int. 2015 Aug 10. Epub 2015 Aug 10. PMID: [26271432](#)

**Article Published Date** : Aug 09, 2015

**Authors** : Debashis Dutta, Kochupurackal P Mohanakumar

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80), Catechin : CK(512) : AC(169), Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333)

**Diseases** : Oxidative Stress : CK(3799) : AC(1356), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Natural Substance/Drug Synergy : CK(349) : AC(140)

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**This review collates the current knowledge of tea polyphenols and puts into perspective their potential to be considered as nutraceuticals that target various pathologies in PD.**

**Pubmed Data** : Adv Exp Med Biol. 2015;863:117-137. PMID: [26092629](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Mario Caruana, Neville Vassallo

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333), Tea : CK(1840) : AC(385), Theaflavins : CK(1) : AC(1)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59), Neuroprotective Agents : CK(2237) : AC(1053)

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## Grewia Asiatica (AC 1) (CK 2)

**Grewia asiatica has radioprotective and neuroprotective properties.**

**Pubmed Data** : Int J Radiat Biol. 2009 Sep;85(9):787-95. PMID: [19657863](#)

**Article Published Date** : Sep 01, 2009

**Authors** : Rashmi Sisodia, Smita Singh

**Study Type** : Animal Study

**Additional Links**

**Substances** : Grewia Asiatica : CK(4) : AC(2)

**Diseases** : Lipid Peroxidation : CK(692) : AC(252), Neurodegenerative Diseases : CK(3370) : AC(846), Radiation Induced Illness : CK(1046) : AC(264)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Herbal Therapies (Unspecified in Abstracts) (AC 1) (CK 1)

### A review of experimental research on herbal compounds in amyotrophic lateral sclerosis.

**Pubmed Data** : Phytother Res. 2014 Jan ;28(1):9-21. Epub 2013 Mar 21. PMID: [23519768](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Xue Zhang, Yan-Long Hong, De-Sheng Xu, Yi Feng, Li-Jie Zhao, Ke-Feng Ruan, Xiu-Juan Yang

**Study Type** : Review

**Additional Links**

**Substances** : [Herbal Therapies \(Unspecified in Abstracts\)](#) : CK(1) : AC(1)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Additional Keywords** : [Plant Extracts](#) : CK(7290) : AC(2420)

## Hesperidin (AC 3) (CK 4)

### Hesperidin could be a potential therapeutic agent in the treatment of oxidative stress associated neurodegenerative diseases.

**Pubmed Data** : Nutr Neurosci. 2016 Feb 15. Epub 2016 Feb 15. PMID: [26878879](#)

**Article Published Date** : Feb 14, 2016

**Authors** : Arokiasamy Justin Thenmozhi, Tharsius Raja William Raja, Thamilarasan Manivasagam, Udaiyappan Janakiraman, Musthafa Mohamed Essa

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Hesperidin](#) : CK(196) : AC(53)

**Diseases** : [Aluminum Toxicity](#) : CK(195) : AC(75), [Alzheimer's Disease](#) : CK(1282) : AC(375), [Brain: Oxidative Stress](#) : CK(75) : AC(44), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201), [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Problem Substances** : [Aluminum](#) : CK(274) : AC(78)

## Hesperidin has potent antioxidant and neuroprotective effects.

**Pubmed Data** : Gastroenterology. 1985 Apr;88(4):901-7. PMID: [16964766](#)

**Article Published Date** : Apr 01, 1985

**Authors** : Jungsook Cho

### Additional Links

**Substances** : Hesperidin : CK(196) : AC(53)

**Diseases** : Neurodegenerative Diseases : CK(3376) : AC(850)

## Tangerine peel possesses potent anti-neuroinflammatory capacity which is attributed to the collective effect of hesperidin, nobiletin, and tangeretin.

**Pubmed Data** : Food Chem Toxicol. 2014 Sep ;71:176-82. Epub 2014 Jun 20. PMID: [24955543](#)

**Article Published Date** : Aug 31, 2014

**Authors** : Su-Chen Ho, Chun-Ting Kuo

**Study Type** : Animal Study, In Vitro Study

### Additional Links

**Substances** : Citrus Peel : CK(65) : AC(8), Hesperidin : CK(196) : AC(53), Nobiletin : CK(34) : AC(1), Tangeretin : CK(17) : AC(9)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Inflammation : CK(2863) : AC(839), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Interleukin-1 beta downregulation : CK(452) : AC(199), Interleukin-6 Downregulation : CK(1078) : AC(337), Neuroprotective Agents : CK(2235) : AC(1052), Nitric Oxide Inhibitor : CK(223) : AC(108), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Plant Extracts : CK(7288) : AC(2419)

## Honey (AC 1) (CK 1)

## Acacia honey highly nutritional and with strong antioxidant and immuno-modulatory potentials.

**Pubmed Data** : Front Biosci (Elite Ed). 2016 ;8:351-7. Epub 2016 Jan 1. PMID: [26709666](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Aliyu Muhammad, Oyeronke A Odunola, Mohammed A Ibrahim, Abdullahi B Sallau, Ochuko L Erukainure, Idowu A Aimola, Ibrahim Malami

**Study Type** : Review

**Additional Links**

**Substances** : [Honey](#) : CK(503) : AC(102)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Cancers: All](#) : CK(14297) : AC(4542)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Antiproliferative](#) : CK(2461) : AC(1673), [Immunomodulatory](#) : CK(1284) : AC(355)

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## Honokiol (AC 1) (CK 1)

**This study suggests potential anti-amyloidogenic properties of magnolol and honokiol and their structure related derivatives.**

**Pubmed Data** : Sci Rep. 2015 ;5:13556. Epub 2015 Sep 1. PMID: [26324190](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Caiao Guo, Liang Ma, Yudan Zhao, Anlin Peng, Biao Cheng, Qiaoqiao Zhou, Ling Zheng, Kun Huang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Honokiol](#) : CK(41) : AC(27), [Magnolol](#) : CK(20) : AC(13)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400)

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## Hops (AC 1) (CK 1)

**A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.**

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : Chromium : CK(56) : AC(12), Cinnamon : CK(243) : AC(88), Cocoa : CK(522) : AC(77), DHA (Docosahexaenoic Acid) : CK(783) : AC(129), Fish Oil : CK(701) : AC(111), Folic Acid : CK(643) : AC(93), Genistein : CK(515) : AC(228), Hops : CK(76) : AC(26), Policosanol : CK(194) : AC(25), Sesame Seeds : CK(235) : AC(71), Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Neurodegenerative Diseases : CK(3370) : AC(846)

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## Huperzine (AC 10) (CK 13)

### EGCG can be used as an enhanced supplement for huperzine A to treat Alzheimer's disease.

**Pubmed Data** : Nutr Neurosci. 2009 Aug;12(4):142-8. PMID: [19622237](#)

**Article Published Date** : Aug 01, 2009

**Authors** : Lei Zhang, Hui Cao, Jun Wen, Ming Xu

**Study Type** : Animal Study

**Additional Links**

**Substances** : Catechin : CK(512) : AC(169), Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anticarcinogenic Agents : CK(1071) : AC(514), Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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### Ginkgolide A, B, and huperzine A inhibit nitric oxide-induced neurotoxicity.

**Pubmed Data** : Int Immunopharmacol. 2002 Oct;2(11):1551-6. PMID: [12433056](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Hong-Wei Zhao, Xiao-Yu Li

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ginkgo biloba : CK(796) : AC(161), Huperzine : CK(44) : AC(24)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Antiproliferative : CK(2461) : AC(1673), Neuroprotective Agents : CK(2237) : AC(1053)

---

## Huperzine A attenuates cognitive dysfunction and neuronal degeneration caused by beta-amyloid protein-(1-40) in rat.

**Pubmed Data** : Eur J Pharmacol. 2001 Jun 15;421(3):149-56. PMID: [11516430](#)

**Article Published Date** : Jun 15, 2001

**Authors** : R Wang, H Y Zhang, X C Tang

**Study Type** : Animal Study

**Additional Links**

**Substances** : Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Neuroprotective Agents : CK(2237) : AC(1053), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

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## Huperzine A has neurotrophic activity which might be beneficial in treatment of neurodegenerative disorders such as Alzheimer disease.

**Pubmed Data** : Acta Pharmacol Sin. 2005 Jun;26(6):673-8. PMID: [15916732](#)

**Article Published Date** : Jun 01, 2005

**Authors** : Li-li Tang, Rui Wang, Xi-can Tang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antiproliferative : CK(2461) : AC(1673), Neuritogenic : CK(133) : AC(59), Neuroprotective Agents : CK(2237) : AC(1053)

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## Huperzine A has greater efficacy than the drugs donepezil and rivastigmine in raising brain levels of acetylcholine and dopamine in freely-moving rats.

**Pubmed Data** : Acta Pharmacol Sin. 2006 Sep;27(9):1127-36. PMID: [16923332](#)

**Article Published Date** : Sep 01, 2006

**Authors** : Yan-qi Liang, Xi-can Tang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Cholinesterase Inhibitors : CK(5) : AC(4), Dopaminergic : CK(32) :

## Huperzine A has neuroprotective effects beyond the ability to inhibit acetylcholinesterase activity.

**Pubmed Data** : Cell Mol Neurobiol. 2008 Feb;28(2):173-83. Epub 2007 Jul 27. PMID: [17657601](#)

**Article Published Date** : Feb 01, 2008

**Authors** : Hai Yan Zhang, Han Yan, Xi Can Tang

**Study Type** : Review

**Additional Links**

**Substances** : Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Cholinesterase Inhibitors : CK(5) : AC(4) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Huperzine A may have therapeutic value in Alzheimer's disease and vascular dementia.

**Pubmed Data** : Biol Pharm Bull. 2004 Nov;27(11):1844-9. PMID: [18565502](#)

**Article Published Date** : Nov 01, 2004

**Authors** : Hai Yan Zhang, Chun Yan Zheng, Han Yan, Zhi Fei Wang, Li Li Tang, Xin Gao, Xi Can Tang

**Study Type** : Commentary

**Additional Links**

**Substances** : Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140), Dementia: Vascular : CK(13) : AC(4)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Huperzine A protects isolated rat brain mitochondria against beta-amyloid peptide.

**Pubmed Data** : Free Radic Biol Med. 2009 Jun 1;46(11):1454-62. Epub 2009 Mar 9. PMID: [19272446](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Xin Gao, Chun Yan Zheng, Ling Yang, Xi Can Tang, Hai Yan Zhang

**Study Type** : Animal Study

**Additional Links**

**Substances** : Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

## Huperzine A protects mitochondria against beta-amyloid-induced damages.

**Pubmed Data** : J Neurosci Res. 2006 May 1;83(6):1048-57. PMID: [16493671](#)

**Article Published Date** : May 01, 2006

**Authors** : Xin Gao, Xi Can Tang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Mitochondrial Dysfunction : CK(224) : AC(90), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

## Huperzine has significant therapeutic activity in neurological conditions such as Alzheimers.

**Pubmed Data** : Neurosignals. 2005;14(1-2):71-82. PMID: [15956816](#)

**Article Published Date** : Jan 01, 2005

**Authors** : Rui Wang, Xi Can Tang

**Study Type** : Review

**Additional Links**

**Substances** : Huperzine : CK(44) : AC(24)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Pharmacological Actions** : Cholinesterase Inhibitors : CK(5) : AC(4)

## Hydroxytyrosol (AC 1) (CK 1)

### Hydroxytyrosol provides dual neuroprotection and cellular antioxidant defense as both a free radical scavenger and Nrf2 activator.

**Pubmed Data** : Food Funct. 2015 Jun 3. Epub 2015 Jun 3. PMID: [26037629](#)

**Article Published Date** : Jun 02, 2015

**Authors** : Shoujiao Peng, Baoxin Zhang, Juan Yao, Dongzhu Duan, Jianguo Fang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Hydroxytyrosol : CK(21) : AC(17)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)  
**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052), Nrf2 activation : CK(172) : AC(83)

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## Icariin (AC 1) (CK 1)

### Icariin attenuates $\beta$ -amyloid-induced neurotoxicity.

**Pubmed Data** : Neuropharmacology. 2010 Nov;59(6):542-50. Epub 2010 Aug 12. PMID: [20708632](#)

**Article Published Date** : Nov 01, 2010

**Authors** : Ke-Wu Zeng, Hyeonseok Ko, Hyun Ok Yang, Xue-Mei Wang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Icariin : CK(10) : AC(7)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Insulin-like Growth Factor (IGF-1) (AC 4) (CK 7)

### Co-administration of IGF-I and glycosaminoglycans greatly delays motor neuron disease in the mouse model.

**Pubmed Data** : J Neurochem. 2002 Apr;81(1):194-202. PMID: [12067233](#)

**Article Published Date** : Apr 01, 2002

**Authors** : Alfredo Gorio, Elena Lesma, Laura Madaschi, Anna Maria Di Giulio

**Study Type** : Animal Study

**Additional Links**

**Substances** : Glycoaminoglycans : CK(8) : AC(4), Insulin-like Growth Factor (IGF-1) : CK(9) : AC(5)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Motor Neuron Disease : CK(464) : AC(102)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Glycosaminoglycans boost insulin-like growth factor-I-promoted neuroprotection, indicating their potential value in motor neuron disease and peripheral neuropathies.

**Pubmed Data** : Neuroscience. 1999;93(2):565-72. PMID: [10465440](#)

**Article Published Date** : Jan 01, 1999

**Authors** : L Vergani, M Losa, E Lesma, A M Di Giulio, A Torsello, E E Müller, A Gorio

**Study Type** : Animal Study

### Additional Links

**Substances** : Glycoaminoglycans : CK(8) : AC(4), Insulin-like Growth Factor (IGF-1) : CK(9) : AC(5)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Motor Neuron Disease : CK(464) : AC(102), Peripheral Neuropathies : CK(214) : AC(35)

**Pharmacological Actions** : Apoptotic : CK(2941) : AC(2062), Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Drug Synergy : CK(351) : AC(156)

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## Glycosaminoglycans co-administration enhance insulin-like growth factor-I neuroprotective and neuroregenerative activity in traumatic and genetic models of motor neuron disease.

**Pubmed Data** : Int J Dev Neurosci. 2000 Jul-Aug;18(4-5):339-46. PMID: [10817918](#)

**Article Published Date** : Jul 01, 2000

**Authors** : A M Di Giulio, E Germani, E Lesma, E Muller, A Gorio

**Study Type** : Animal Study

### Additional Links

**Substances** : Glycoaminoglycans : CK(8) : AC(4), Insulin-like Growth Factor (IGF-1) : CK(9) : AC(5)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Motor Neuron Disease : CK(464) : AC(102)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053), Neurorestorative : CK(71) : AC(21)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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## IGF-I prevents glutamate-induced motor neuron programmed cell death.

**Pubmed Data** : Food Chem Toxicol. 2009 Jan 15. PMID: [15193297](#)

**Article Published Date** : Jan 15, 2009

**Authors** : Andrea M Vincent, Bret C Mobley, Andrew Hiller, Eva L Feldman

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Insulin-like Growth Factor \(IGF-1\)](#) : CK(9) : AC(5)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Excitotoxicity](#) : CK(58) : AC(35)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062) , [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Isoflavones (AC 2) (CK 4)

### Soy meal is a potential alternative to estrogen in the prevention and treatment of Alzheimer's disease.

**Pubmed Data** : Pak J Biol Sci. 2008 Apr 15;11(8):1114-9. PMID: [18819549](#)

**Article Published Date** : Apr 15, 2008

**Authors** : Alireza Sarkaki, Reza Amani, Mohammad Badavi, Ahmad Z Moghaddam, Hadi Aligholi, Maryam Safahani, Mohammad H Haghighizadeh

**Study Type** : Animal Study

### Additional Links

**Substances** : [Isoflavones](#) : CK(631) : AC(129) , [Soy](#) : CK(1787) : AC(399)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Dementia](#) : CK(571) : AC(79) , [Estrogen Deficiency](#) : CK(57) : AC(19) , [Learning disorders](#) : CK(188) : AC(50)

**Additional Keywords** : [Natural Substances Versus Drugs](#) : CK(1694) : AC(300) , [Ovariectomy-Induced Changes](#) : CK(80) : AC(37)

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### Soy meal may have the potential neuroprotective effect against post-menopausal cognitive deficiency and weight gain.

**Pubmed Data** : Pak J Biol Sci. 2009 Oct 15;12(20):1338-45. PMID: [20128500](#)

**Article Published Date** : Oct 15, 2009

**Authors** : A Sarkaki, M Badavi, H Aligholi, A Zand Moghaddam

**Study Type** : Animal Study

### Additional Links

**Substances** : [Isoflavones](#) : CK(631) : AC(129) , [Soy Protein](#) : CK(331) : AC(56)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Parkinson's Disease](#) : CK(525) : AC(163) , [Perimenopausal Syndrome](#) : CK(52) : AC(6) , [Postmenopausal Disorders: Weight Gain/Obesity](#) : CK(4) : AC(2)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Ovariectomy-Induced Changes](#) : CK(80) : AC(37)

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## Isothiocyanate (AC 2) (CK 3)

### Polyphenol antioxidants have properties to treat neurodegenerative diseases.

**Pubmed Data** : Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type** : Review

#### Additional Links

**Substances** : Allicin : CK(48) : AC(25), Carnosic Acid : CK(21) : AC(16), Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Isothiocyanate : CK(15) : AC(4), Quercetin : CK(557) : AC(246), Resveratrol : CK(1232) : AC(737), Rosmarinic acid : CK(21) : AC(11), Sulforaphane : CK(533) : AC(262)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

### The isothiocyanate isolated from Moringa oleifera shows potent anti-inflammatory activity in the treatment of murine sub-acute Parkinson's disease.

**Pubmed Data** : Rejuvenation Res. 2016 Jun 1. Epub 2016 Jun 1. PMID: [27245199](#)

**Article Published Date** : May 31, 2016

**Authors** : Sabrina Giacoppo, Soundara Rajan Thangavelu, Gina Rosalinda De Nicola, Renato Iori, Patrick Rollin, Placido Bramanti, Emanuela Mazzon

**Study Type** : Animal Study

#### Additional Links

**Substances** : Isothiocyanate : CK(15) : AC(4), Moringa oleifera : CK(150) : AC(73)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574)

## Kaempferol (AC 1) (CK 2)

## Kaempferol and Catechin produced a concentration dependent anti-fibrillogenic effects.

**Pubmed Data** : Int J Biol Macromol. 2015 Jul 29. Epub 2015 Jul 29. PMID: [26231329](#)

**Article Published Date** : Jul 28, 2015

**Authors** : Waseem Feeroze Bhat, Sheraz Ahmad Bhat, Bilqees Bano

**Study Type** : Animal Study

**Additional Links**

**Substances** : Catechin : CK(512) : AC(169), Kaempferol : CK(50) : AC(36)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Kava Kava (AC 2)(CK 2)

### Kava contains a compound which protects against neurodegeneration.

**Pubmed Data** : Bioorg Med Chem. 2010 May 1;18(9):3133-9. Epub 2010 Mar 20. PMID: [20371185](#)

**Article Published Date** : May 01, 2010

**Authors** : Arisa Tanaka, Nanako Hamada, Yasunori Fujita, Tomohiro Itoh, Yoshinori Nozawa, Munekazu Iinuma, Masafumi Ito

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Kava Kava : CK(230) : AC(40)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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### Kava contains compounds which protect neural cells against Alzheimer associated amyloid beta-peptide induced neurotoxicity.

**Pubmed Data** : Mol Pharmacol. 2008 Jun;73(6):1785-95. Epub 2008 Mar 11. PMID: [18334601](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Christoph J Wruck, Mario E Götz, Thomas Herdegen, Deike Varoga, Lars-Ove Brandenburg, Thomas Pufe

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Kava Kava : CK(230) : AC(40)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Kiwifruit (AC 1) (CK 2)

**A. arguta might be considered possible substance to prevent neurodegeneration through AChE inhibition and strong antioxidant activity.**

**Pubmed Data** : Evid Based Complement Alternat Med. 2015 ;2015:876484. Epub 2015 Oct 21.  
PMID: [26576196](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Jeong Su Ha, Dong Eun Jin, Seon Kyeong Park, Chang Hyeon Park, Tae Wan Seung, Dong-Won Bae, Dae-Ok Kim, Ho Jin Heo

**Study Type** : Animal Study

**Additional Links**

**Substances** : Kiwifruit : CK(26) : AC(7)

**Diseases** : Amnesia: Drug-Induced : CK(13) : AC(8) , Brain: Oxidative Stress : CK(75) : AC(44) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Acetylcholinesterase Inhibitor : CK(36) : AC(18) , Anti-Inflammatory Agents : CK(4500) : AC(1574), Antioxidants : CK(7191) : AC(2630) , Malondialdehyde Down-regulation : CK(537) : AC(143), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Lavender (AC 1) (CK 10)

**Lavender aromatherapy has a beneficial effect on emotions and aggressive behavior of elderly with dementia**

**Pubmed Data** : Taehan Kanho Hakhoe Chi. 2005 Apr;35(2):303-12. PMID: [15860944](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Sun-Young Lee

**Study Type** : Human Study

**Additional Links**

**Substances** : [Lavender](#) : CK(363) : AC(45)

**Diseases** : [Aggression](#) : CK(163) : AC(17) , [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Aromatherapy](#) : CK(652) : AC(65)

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## Lavender: Essential Oil (AC 3) (CK 40)

**Aromatherapy has a positive effect on dementia in patients with Alzheimer's disease.**

**Pubmed Data** : Psychogeriatrics. 2009 Dec ;9(4):173-9. PMID: [20377818](#)

**Article Published Date** : Nov 30, 2009

**Authors** : Daiki Jimbo, Yuki Kimura, Miyako Taniguchi, Masashi Inoue, Katsuya Urakami

**Study Type** : Human Study

**Additional Links**

**Substances** : [Lavender: Essential Oil](#) : CK(176) : AC(20) , [Rosemary: Essential Oil](#) : CK(10) : AC(1)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Aromatherapy](#) : CK(652) : AC(65)

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**Lavender oil is effective in reducing challenging behaviours in individuals with dementia.**

**Pubmed Data** : BMC Geriatr. 2010 ;10:49. Epub 2010 Jul 22. PMID: [20649945](#)

**Article Published Date** : Dec 31, 2009

**Authors** : Eva S van der Ploeg, Barbara Eppingstall, Daniel W O'Connor

**Study Type** : Human Study

**Additional Links**

**Substances** : [Lavender: Essential Oil](#) : CK(176) : AC(20)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Aromatherapy](#) : CK(652) : AC(65)

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**The results confirm the efficacy of the three herbal active substances in elderly patients with anxiety, depression, and dementia.**

**Pubmed Data** : Wien Med Wochenschr. 2015 Jun 20. Epub 2015 Jun 20. PMID: [26092515](#)

**Article Published Date** : Jun 19, 2015

**Authors** : Siegfried Kasper

**Study Type** : Meta Analysis

**Additional Links**

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161) , [Lavender: Essential Oil](#) : CK(176) : AC(20) ,  
[Lavender: Essential Oil](#) : CK(176) : AC(20)

**Diseases** : [Anxiety Disorders](#) : CK(1215) : AC(180) , [Dementia](#) : CK(571) : AC(79) , [Depression](#) :  
CK(1820) : AC(263)

**Pharmacological Actions** : [Antidepressive Agents](#) : CK(986) : AC(157)

**Additional Keywords** : [Natural Substances Versus Drugs](#) : CK(1694) : AC(300) , [Plant Extracts](#) :  
CK(7288) : AC(2419)

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## Licorice (AC 2) (CK 2)

### **G. inflata may be a novel therapeutic for Alzheimer's disease and tauopathies.**

**Pubmed Data** : Drug Des Devel Ther. 2016 ;10:885-96. Epub 2016 Feb 29. PMID: [27013866](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Kuo-Hsuan Chang, I-Cheng Chen, Hsuan-Yuan Lin, Hsuan-Chiang Chen, Chih-Hsin Lin, Te-Hsien Lin, Yu-Ting Weng, Chih-Ying Chao, Yih-Ru Wu, Jung-Yaw Lin, Guey-Jen Lee-Chen, Chiung-Mei Chen

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Licorice](#) : CK(345) : AC(110)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) :  
AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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**Nutraceuticals derived from such spices as turmeric, red pepper, black pepper, licorice, clove, ginger, garlic, coriander, and cinnamon target inflammatory pathways, thereby preventing neurodegenerative diseases.**

**Pubmed Data** : Mol Neurobiol. 2011 Oct ;44(2):142-59. Epub 2011 Mar 1. PMID: [21360003](#)

**Article Published Date** : Oct 01, 2011

**Authors** : Ramaswamy Kannappan, Subash Chandra Gupta, Ji Hye Kim, Simone Reuter, Bharat Bhushan Aggarwal

**Study Type** : Review

**Additional Links**

**Substances** : [Black Pepper](#) : CK(229) : AC(96), [Cinnamon](#) : CK(243) : AC(88), [Clove](#) : CK(104) : AC(55), [Coriander](#) : CK(1) : AC(1), [Garlic](#) : CK(712) : AC(225), [Ginger](#) : CK(676) : AC(175), [Licorice](#) : CK(345) : AC(110), [Red Pepper](#) : CK(4) : AC(2)

**Diseases** : [Inflammation](#) : CK(2863) : AC(839), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Lignans (AC 1) (CK 2)

**Lig-8, a bioactive lignophenol derivative from bamboo lignin, protects against neuronal damage in vitro and in vivo.**

**Pubmed Data** : J Pharmacol Sci. 2006 Oct;102(2):196-204. Epub 2006 Oct 7. PMID: [17031070](#)

**Article Published Date** : Oct 01, 2006

**Authors** : Yasushi Ito, Masamitsu Shimazawa, Yukihiro Akao, Yoshimi Nakajima, Norio Seki, Yoshinori Nozawa, Hideaki Hara

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Bamboo](#) : CK(65) : AC(32), [Lignans](#) : CK(169) : AC(46)

**Diseases** : [Brain Damage](#) : CK(93) : AC(44), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062), [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Proteasome Inhibitors](#) : CK(51) : AC(33)

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## Lion's Mane (Heridium Erinaceus) (AC 2) (CK 3)

**Lion's Mane (Heridium erinaceus) contains a compound,**

## Erinacine Q, which stimulates nerve growth factor.

**Pubmed Data** : Biosci Biotechnol Biochem. 2002 Mar;66(3):571-5. PMID: [12005051](#)

**Article Published Date** : Mar 01, 2002

**Authors** : Hiromichi Kenmoku, Takashi Shimai, Tomonobu Toyomasu, Nobuo Kato, Takeshi Sassa

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Lion's Mane \(Hericium Erinaceus\)](#) : CK(46) : AC(22)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(526) : AC(164)

**Pharmacological Actions** : [Neuritogenic](#) : CK(133) : AC(59)

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## Lion's mane prevented impairments of spatial short-term and visual recognition memory induced by amyloid $\beta$ (25-35) peptide.

**Pubmed Data** : Biomed Res. 2011 Feb ;32(1):67-72. PMID: [21383512](#)

**Article Published Date** : Feb 01, 2011

**Authors** : Koichiro Mori, Yutaro Obara, Takahiro Moriya, Satoshi Inatomi, Norimichi Nakahata

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Lion's Mane \(Hericium Erinaceus\)](#) : CK(46) : AC(22)

**Diseases** : [Amyloid toxicity](#) : CK(3) : AC(2), [Amyloid  \$\beta\$  peptide toxicity](#) : CK(2) : AC(1), [Learning disorders](#) : CK(188) : AC(50), [Memory Disorders](#) : CK(340) : AC(103), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Lithium (AC 1) (CK 1)

### Lithium may have preventive protential in neurodegenerative diseases.

**Pubmed Data** : CNS Neurosci Ther. 2009;15(4):333-44. PMID: [19889130](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Antoni Camins, Ester Verdaguer, Felix Junyent, Marc Yeste-Velasco, Carme Pelegrí, Jordi Vilaplana, Mercé Pallás

**Study Type** : Review

**Additional Links**

**Substances** : Lithium : CK(31) : AC(8)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59), Neuroprotective Agents : CK(2235) : AC(1052)

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## Long Pepper (AC 3) (CK 5)

**Long-term consumption of aromatic compounds from spices could be effective in the prevention of Alzheimer's disease.**

**Pubmed Data** : Nat Prod Commun. 2016 Apr ;11(4):507-10. PMID: [27396206](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Shinichi Matsumura, Kazuya Murata, Yuri Yoshioka, Hideaki Matsuda

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Cardamom : CK(39) : AC(9), Cinnamon : CK(243) : AC(88), Ginger : CK(676) : AC(175), Long Pepper : CK(14) : AC(8), Turmeric : CK(4951) : AC(2343)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053),  $\beta$ -secretase Inhibitor : CK(1) : AC(1)

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**Piper longum possesses neuroprotective effects and has ameliorative properties in dopaminergic neurons.**

**Pubmed Data** : Pharm Biol. 2015 Oct ;53(10):1516-24. Epub 2015 Apr 10. PMID: [25857256](#)

**Article Published Date** : Sep 30, 2015

**Authors** : Ying Bi, Peng-Cheng Qu, Qing-Song Wang, Li Zheng, Hao-Long Liu, Rong Luo, Xiao-Qing Chen, Yin-Ying Ba, Xia Wu, Hui Yang

**Study Type** : Animal Study

**Additional Links**

**Substances** : Long Pepper : CK(14) : AC(8)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052), Superoxide Dismutase Up-regulation : CK(504) : AC(169)

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**These findings provide novel insight into the**

## neuroprotective function of Piper longum as well as evidence in favor of its use in PD treatment.

**Pubmed Data** : Brain Res. 2015 Jul 29. Epub 2015 Jul 29. PMID: [26232071](#)

**Article Published Date** : Jul 28, 2015

**Authors** : Hao Wang, Jia Liu, Ge Gao, Xia Wu, Xiaomin Wang, Hui Yang

**Study Type** : Animal Study

**Additional Links**

**Substances** : Long Pepper : CK(14) : AC(8)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

## Loquat (AC 1) (CK 2)

### Loquate protects against b-amyloid-induced oxidative stress and memory impairment.

**Pubmed Data** : Food Chem Toxicol. 2011 Apr;49(4):780-4. Epub 2010 Dec 17. PMID: [21168467](#)

**Article Published Date** : Apr 01, 2011

**Authors** : Mi-Jeong Kim, Jeongmin Lee, Ah-Reum Seong, Yoo-Hyun Lee, Yung-Jae Kim, Hum-Young Baek, Young Jun Kim, Woo Jin Jun, Ho-Geun Yoon

**Study Type** : Animal Study

**Additional Links**

**Substances** : Loquat : CK(75) : AC(37)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Lipid Peroxidation : CK(692) : AC(252), Memory Loss : CK(153) : AC(40)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

## Lotus (AC 1) (CK 1)

### Neferine attenuates the protein level and toxicity of

## mutant huntingtin in PC-12 cells.

**Pubmed Data** : Molecules. 2015 ;20(3):3496-514. Epub 2015 Feb 18. PMID: [25699594](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Vincent Kam Wai Wong, An Guo Wu, Jing Rong Wang, Liang Liu, Betty Yuen-Kwan Law

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Lotus : CK(73) : AC(46)

**Diseases** : Huntington Disease : CK(84) : AC(32) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201) , Autophagy Up-regulation : CK(107) : AC(64), Neuroprotective Agents : CK(2237) : AC(1053)

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## Lutein (AC 2) (CK 11)

### Lutein may have a role in the prevention of dementia due to its anti-oxidant properties.

**Pubmed Data** : Br J Nutr. 2009 Nov;102(9):1280-4. Epub 2009 Jul 22. PMID: [19622187](#)

**Article Published Date** : Nov 01, 2009

**Authors** : Kiyotaka Nakagawa, Takehiro Kiko, Keijiro Hatade, Phumon Sookwong, Hiroyuki Arai, Teruo Miyazawa

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Lutein : CK(225) : AC(37)

**Diseases** : Dementia : CK(571) : AC(79) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630)

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### Maintaining higher concentrations of lutein in respect to plasma lipids may moderately decrease the risk of dementia and Alzheimer's disease.

**Pubmed Data** : J Gerontol A Biol Sci Med Sci. 2015 Aug 18. Epub 2015 Aug 18. PMID: [26286605](#)

**Article Published Date** : Aug 17, 2015

**Authors** : Catherine Feart, Luc Letenneur, Catherine Helmer, Cécilia Samieri, Wolfgang Schalch, Stéphane Etheve, Cécile Delcourt, Jean-François Dartigues, Pascale Barberger-Gateau

**Study Type** : Human Study

**Additional Links**

**Substances** : Carotenoids : CK(1620) : AC(306), Lutein : CK(225) : AC(37)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Dementia : CK(571) : AC(79)  
**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)  
**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## Luteolin (AC 4) (CK 6)

**Apigenin and luteolin have anti-inflammatory effects and may have neuroprotective/disease-modifying properties in various neurodegenerative disorders, including Alzheimer's disease (AD).**

**Pubmed Data** : J Neuroinflammation. 2008;5:41. Epub 2008 Sep 25. PMID: [18817573](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Kavon Rezai-Zadeh, Jared Ehrhart, Yun Bai, Paul R Sanberg, Paula Bickford, Jun Tan, R Douglas Shytle

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Apigenin : CK(158) : AC(101) , Luteolin : CK(104) : AC(78)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain: Microglial Activation : CK(82) : AC(53) , Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Immunomodulatory : CK(1284) : AC(355), Interferon Inducers : CK(31) : AC(9) , Neuroprotective Agents : CK(2235) : AC(1052), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

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**Luteolin protects against amyloid beta peptide-induced toxicity in mice.**

**Pubmed Data** : Neuroscience. 2009 Sep 15;162(4):1232-43. Epub 2009 May 13. PMID: [19442706](#)

**Article Published Date** : Sep 15, 2009

**Authors** : R Liu, M Gao, G-F Qiang, T-T Zhang, X Lan, J Ying, G-H Du

**Study Type** : Animal Study

**Additional Links**

**Substances** : Luteolin : CK(104) : AC(78)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Learning disorders : CK(188) : AC(50) , Memory Disorders : CK(340) : AC(103), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## The flavonoid extracted from citrus known as luteolin reduces Alzheimer's disease beta-amyloid plaque production in mice.

**Pubmed Data** : J Cell Mol Med. 2009 Mar;13(3):574-88. Epub 2008 Apr 9. PMID: [18410522](#)

**Article Published Date** : Mar 01, 2009

**Authors** : Kavon Rezai-Zadeh, R Douglas Shytle, Yun Bai, Jun Tian, Huayan Hou, Takashi Mori, Jin Zeng, Demian Obregon, Terrence Town, Jun Tan

**Study Type** : Animal Study

### Additional Links

**Substances** : [Flavonoids](#) : CK(1194) : AC(376) , [Luteolin](#) : CK(104) : AC(78)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## This study provides a review of the available literature regarding the neuroprotective effects of luteolin and its molecular mechanisms of action.

**Pubmed Data** : Brain Res Bull. 2015 Oct ;119(Pt A):1-11. Epub 2015 Sep 8. PMID: [26361743](#)

**Article Published Date** : Sep 30, 2015

**Authors** : Seyed Fazel Nabavi, Nady Braidy, Olga Gortzi, Eduardo Sobarzo-Sanchez, Maria Daglia, Krystyna Skalicka-Woźniak, Seyed Mohammad Nabavi

**Study Type** : Review

### Additional Links

**Substances** : [Luteolin](#) : CK(104) : AC(78)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Lychee (AC 1) (CK 1)

## Litchi extracts can protect neurons from oxidative stress-caused cell death in a serum deprivation model, and prevent and protect neuron cells from the toxicity of hydrogen peroxide.

**Pubmed Data** : Nat Prod Commun. 2013 Nov ;8(11):1583-6. PMID: [24427947](#)

**Article Published Date** : Oct 31, 2013

**Authors** : Sarin Tadtong, Mayuree Kanlayavattanakul, Nattaya Lourith

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Lychee](#) : CK(2) : AC(1)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630) , [Neuritogenic](#) : CK(133) : AC(59) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Lycopene (AC 2) (CK 4)

**Increasing lycopene in neurons may be a novel approach to attenuate onset and development of Alzheimer disease.**

**Pubmed Data** : Neurosci Lett. 2015 Oct 7. Epub 2015 Oct 7. PMID: [26453763](#)

**Article Published Date** : Oct 06, 2015

**Authors** : Wei Chen, Liuqun Mao, Huanhuan Xing, Lei Xu, Xiang Fu, Liyingzi Huang, Dongling Huang, Zhijun Pu, Qinghua Li

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Lycopene](#) : CK(365) : AC(78)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**Lycopene could protect mitochondria against A $\beta$ -induced damage.**

**Pubmed Data** : Neurochem Res. 2016 Jan 27. Epub 2016 Jan 27. PMID: [26816095](#)

**Article Published Date** : Jan 26, 2016

**Authors** : Mingyue Qu, Zheng Jiang, Yuanxiang Liao, Zhenyao Song, Xinzhong Nan

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Lycopene](#) : CK(365) : AC(78)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Lysine (AC 1) (CK 1)

**Increasing the lysine to arginine ratio in the diet or through supplementation may inhibit HSV-1 infection associated with Alzheimer dementia.**

**Pubmed Data** : Eksp Klin Farmakol. 2002 Jul-Aug;65(4):19-22. PMID: [21127688](#)

**Article Published Date** : Jul 01, 2002

**Authors** : Robert N Rubey

**Study Type** : Review

**Additional Links**

**Substances** : Lysine : CK(83) : AC(23)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Dementia : CK(571) : AC(79) , Dementia: Alzheimer Type : CK(23) : AC(3), HSV-1 : CK(53) : AC(44)

**Additional Keywords** : Diseases that are Linked : CK(2285) : AC(299)

## Magnesium (AC 3) (CK 5)

**Magnesium-l-threonate treatment inhibits cognitive decline in APP/PS1 Tg mice.**

**Pubmed Data** : FASEB J. 2015 Dec ;29(12):5044-58. Epub 2015 Aug 20. PMID: [26293690](#)

**Article Published Date** : Nov 30, 2015

**Authors** : Xin Yu, Pei-Pei Guan, Jing-Wen Guo, Yue Wang, Long-Long Cao, Guo-Biao Xu, Konstantinos Konstantopoulos, Zhan-You Wang, Pu Wang

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Magnesium : CK(1516) : AC(193)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

## Oral administration of magnesium-L-threonate reduces neuroinflammation.

**Pubmed Data** : Cell Mol Immunol. 2015 Nov 9. Epub 2015 Nov 9. PMID: [26549801](#)

**Article Published Date** : Nov 08, 2015

**Authors** : Pu Wang, Xin Yu, Pei-Pei Guan, Jing-Wen Guo, Yue Wang, Yan Zhang, Hang Zhao, Zhan-You Wang

**Study Type** : In Vitro Study, Transgenic Animal Study

**Additional Links**

**Substances** : Magnesium : CK(1516) : AC(193)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Interleukin-1 beta downregulation : CK(452) : AC(199)

**Additional Keywords** : Interleukin-1 beta downregulation : CK(452) : AC(199)

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## This study found that patients with Alzheimer's disease had significantly lower magnesium in cerebrospinal fluid.

**Pubmed Data** : Am J Alzheimers Dis Other Dement. 2015 Sep 7. Epub 2015 Sep 7. PMID: [26351088](#)

**Article Published Date** : Sep 06, 2015

**Authors** : Nicola Veronese, Anna Zurlo, Marco Solmi, Claudio Luchini, Caterina Trevisan, Giulia Bano, Enzo Manzato, Giuseppe Sergi, Ragnar Rylander

**Study Type** : Review

**Additional Links**

**Substances** : Magnesium : CK(1516) : AC(193)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Magnesium Deficiency : CK(401) : AC(48)

**Additional Keywords** : Magnesium Deficiency : CK(401) : AC(48)

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## Magnolol (AC 1) (CK 1)

## This study suggests potential anti-amyloidogenic properties of magnolol and honokiol and their structure related derivatives.

**Pubmed Data** : Sci Rep. 2015 ;5:13556. Epub 2015 Sep 1. PMID: [26324190](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Caiao Guo, Liang Ma, Yudan Zhao, Anlin Peng, Biao Cheng, Qiaoqiao Zhou, Ling Zheng,

Kun Huang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Honokiol : CK(41) : AC(27) , Magnolol : CK(20) : AC(13)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Dose Response : CK(1035) : AC(400)

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## Mangosteen (AC 2) (CK 2)

**Alpha-mangostin potentially possesses neuroprotective effects in a cellular model of Parkinson's disease.**

**Pubmed Data** : J Toxicol. 2015 ;2015:919058. Epub 2015 Aug 18. PMID: [26357513](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Prachya Janhom, Permphan Dharmasaroja

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Mangosteen : CK(90) : AC(36)

**Diseases** : Oxidative Stress : CK(3800) : AC(1357) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201) , Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Blood Brain Barrier : CK(32) : AC(12) , Gene Expression Regulation : CK(422) : AC(209)

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**Mangosteen extract has a protective effect against beta-amyloid-induced cytotoxicity, oxidative stress and altered protein expression in neurons.**

**Pubmed Data** : J Proteome Res. 2010 May 7;9(5):2076-86. PMID: [20232907](#)

**Article Published Date** : May 07, 2010

**Authors** : Primchanien Moongkarndi, Chatchawan Srisawat, Putita Saetun, Jiraporn Jantaravinid, Chayanon Peerapittayamongkol, Rungtip Soi-ampornkul, Sarawut Junnu, Supachok Sinchaikul, Shui-Tein Chen, Patcharakajee Charoensilp, Visith Thongboonkerd, Neelobol Neungton

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Mangosteen : CK(90) : AC(36)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)  
**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Maple Syrup (AC 1) (CK 1)

**This study supports the potential neuroprotective effects of maple syrup extracts.**

**Pubmed Data** : Neurochem Res. 2016 Jul 14. Epub 2016 Jul 14. PMID: [27418278](#)

**Article Published Date** : Jul 13, 2016

**Authors** : Hang Ma, Nicholas A DaSilva, Weixi Liu, Pragati P Nahar, Zhengxi Wei, Yongqiang Liu, Priscilla T Pham, Rebecca Crews, Dhiraj A Vattem, Angela L Slitt, Zahir A Shaikh, Navindra P Seeram

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Maple Syrup : CK(4) : AC(4)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140), Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Interleukin-6 Downregulation : CK(1078) : AC(337), Neuroprotective Agents : CK(2235) : AC(1052) , Prostaglandin PGE2 downregulation : CK(23) : AC(11), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Marijuana (AC 1) (CK 1)

**Cannabidiol, a non-psychoactive component from Cannabis sativa, exhibits neuroprotective, antioxidant and anti-apoptotic effect against beta-amyloid peptide toxicity.**

**Pubmed Data** : Fitoterapia. 2011 Jan 26. Epub 2011 Jan 26. PMID: [15030397](#)

**Article Published Date** : Jan 26, 2011

**Authors** : Teresa Iuvone, Giuseppe Esposito, Ramona Esposito, Rita Santamaria, Massimo Di Rosa,

Angelo A Izzo

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Marijuana : CK(1741) : AC(399)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Medium Chain Triglycerides (AC 2) (CK 13)

**Caprylic triglyceride improve certain cases of mild-to-moderate Alzheimer's disease.**

**Article Published Date** : Dec 31, 2012

**Authors** : Steven Douglas Maynard, Jeff Gelblum

**Study Type** : Human: Case Report

**Additional Links**

**Substances** : Caprylic Acid : CK(6) : AC(4) , Coconut Oil : CK(177) : AC(38) , Medium Chain Triglycerides : CK(55) : AC(16)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

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**Medium Chain Triglycerides (coconut fat) increase cognitive performance in Alzheimer's disease.**

**Pubmed Data** : [Neurobiol Aging](#). 2004 Mar;25(3):311-4. PMID: [15123336](#)

**Article Published Date** : Mar 22, 2006

**Authors** : Mark A Reger, Samuel T Henderson, Cathy Hale, Brenna Cholerton, Laura D Baker, G S Watson, Karen Hyde, Darla Chapman, Suzanne Craft

**Study Type** : Human Study

**Additional Links**

**Substances** : Coconut : CK(404) : AC(75) , Coconut Oil : CK(177) : AC(38) , Medium Chain Triglycerides : CK(55) : AC(16)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

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## Melanin: Bacterial (AC 2) (CK 3)

### Bacterial melanin in rat models of Parkinson's disease: a potential neuroprotective strategy.

**Pubmed Data** : Neural Regen Res. 2015 Feb ;10(2):211-2. PMID: [25883617](#)

**Article Published Date** : Jan 31, 2015

**Authors** : Tigran Petrosyan

**Study Type** : Review

**Additional Links**

**Substances** : Melanin: Bacterial : CK(4) : AC(2)

**Diseases** : Parkinson's Disease : CK(526) : AC(164)

### Bacterial melanin increases electrical activity of neurons in Substantia Nigra pars compacta.

**Pubmed Data** : J Neural Transm. 2014 ;121(3):259-65. PMID: [25006618](#)

**Article Published Date** : Dec 31, 2013

**Authors** : T R Petrosyan, V A Chavushyan, A S Hovsepyan

**Study Type** : Insect Study

**Additional Links**

**Substances** : Melanin: Bacterial : CK(4) : AC(2)

**Diseases** : Parkinson's Disease : CK(526) : AC(164) , Substantia Nigra: Damage : CK(3) : AC(1)

**Pharmacological Actions** : Neurorestorative : CK(71) : AC(21)

## Melatonin (AC 21) (CK 64)

A disrupted circadian rhythm followed by oxidative stress and inflammatory processes could be the pathophysiological basis for several disorders of the central nervous system.

**Pubmed Data** : Curr Pharm Des. 2015 Jul 6. Epub 2015 Jul 6. PMID: [26144936](#)

**Article Published Date** : Jul 05, 2015

**Authors** : Ana L Colín-Gonzalez, Gabriela Aguilera, Iris N Serratos, Begona M Escribano, Abel Santamaria, Isaac Tunez

**Study Type** : Review

**Additional Links**

**Substances** : Melatonin : CK(945) : AC(303)

**Diseases** : Circadian Dysregulation : CK(165) : AC(34) , Inflammation : CK(2863) : AC(839) , Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3799) : AC(1356) , Psychiatric Disorders : CK(110) : AC(27)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630)

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## Coffee and caffeine chronologically enhanced the antiamyloidogenic activity of melatonin through suppression of A $\beta$ oligomerization.

**Pubmed Data** : Drug Des Devel Ther. 2015 ;9:241-72. Epub 2014 Dec 24. PMID: [25565776](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Li-Fang Zhang, Zhi-Wei Zhou, Zhen-Hai Wang, Yan-Hui Du, Zhi-Xu He, Chuanhai Cao, Shu-Feng Zhou

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Caffeine : CK(177) : AC(30) , Coffee : CK(746) : AC(99) , Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052) , Nrf2 activation : CK(172) : AC(83)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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## Melatonin administration could alleviate the burden of Alzheimer's disease and may be considered a promising pharmaceutical treatment of the disease.

**Pubmed Data** : J Alzheimers Dis. 2015 Jul 9 ;47(1):103-16. PMID: [26402759](#)

**Article Published Date** : Jul 08, 2015

**Authors** : Ekaterina A Rudnitskaya, Natalia A Muraleva, Kseniya Yi Maksimova, Elena Kiseleva, Nataliya G Kolosova, Natalia A Stefanova

**Study Type** : Animal Study

**Additional Links**

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## Melatonin could be a useful ad-on therapeutic tool for treating mild cognitive impairment.

**Pubmed Data** : Curr Neuroparmacol. 2010 Sep ;8(3):218-27. PMID: [21358972](#)

**Article Published Date** : Aug 31, 2010

**Authors** : Daniel P Cardinali, Analía M Furio, Luis I Brusco

**Study Type** : Review

**Additional Links**

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## Melatonin improves pro-survival signals and reduces pro-death signals in age-related impairments of neural processes.

**Pubmed Data** : J Pineal Res. 2008 Nov;45(4):497-505. Epub 2008 Aug 13. PMID: [18705649](#)

**Article Published Date** : Nov 01, 2008

**Authors** : Javier Gutierrez-Cuesta, Marta Tajas, Andrés Jiménez, Ana Coto-Montes, Antoni Camins, Mercè Pallàs

**Study Type** : Animal Study

**Additional Links**

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Aging : CK(1581) : AC(428), Aging: Brain : CK(246) : AC(84), Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052), NF-kappaB Inhibitor : CK(1100) : AC(686), Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

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## Melatonin is selectively taken up by mitochondrial membranes which prevents oxidative stress induced mitochondrial dysfunction.

**Pubmed Data** : Rejuvenation Res. 2015 Jun 18. Epub 2015 Jun 18. PMID: [26087000](#)

**Article Published Date** : Jun 17, 2015

**Authors** : Showkat Ahmad Ganie, Tanveer Dar, Aashiq Bhat, Khalid Dar, Suhail Anees, Akbar Masood, Mohammad Afzal Zargar

**Study Type** : Review

**Additional Links**

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Huntington Disease : CK(84) : AC(32), Mitochondrial Dysfunction : CK(224) : AC(90), Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions :** Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords :** Neuroprotective Agents : CK(2235) : AC(1052)

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## Melatonin levels are associated with hypothalamic gray matter volume loss and disease severity in PD patients.

**Pubmed Data :** Mov Disord. 2016 Mar 12. Epub 2016 Mar 12. PMID: [26971528](#)

**Article Published Date :** Mar 11, 2016

**Authors :** David P Breen, Cristina Nombela, Romina Vuono, P Simon Jones, Kate Fisher, David J Burn, David J Brooks, Akhilesh B Reddy, James B Rowe, Roger A Barker

**Study Type :** Human Study

**Additional Links**

**Substances :** Melatonin : CK(946) : AC(304)

**Diseases :** Circadian Dysregulation : CK(165) : AC(34), Parkinson's Disease : CK(525) : AC(163)

**Additional Keywords :** Parkinson's Disease : CK(525) : AC(163)

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## Melatonin loss in aging could be recompensed through dietary supplementation as a beneficial therapeutic strategy for AD prevention and progression.

**Pubmed Data :** Neurosci Lett. 2016 Apr 8. Epub 2016 Apr 8. PMID: [27068758](#)

**Article Published Date :** Apr 07, 2016

**Authors :** Sujira Mukda, Jiraporn Panmanee, Parichart Boontem, Piyarat Govitrapong

**Study Type :** Animal Study

**Additional Links**

**Substances :** Melatonin : CK(946) : AC(304)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions :** Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords :** Neuroprotective Agents : CK(2235) : AC(1052)

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## Melatonin may potentiate the anti-Alzheimer properties of resveratrol.

**Pubmed Data :** J Clin Neurol. 2010 Sep;6(3):127-37. Epub 2010 Sep 30. PMID: [20944813](#)

**Article Published Date :** Sep 01, 2010

**Authors :** Kyoung Ja Kwon, Hee-Jin Kim, Chan Young Shin, Seol-Heui Han

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Melatonin : CK(946) : AC(304), Resveratrol : CK(1232) : AC(737)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions :** Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords :** Natural Substance Synergy : CK(534) : AC(244)

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## Melatonin normalizes markers of oxidative stress to control values in a mouse model of ALS.

**Pubmed Data** : J Pineal Res. 2006 Nov;41(4):313-23. PMID: [17014688](#)

**Article Published Date** : Nov 01, 2006

**Authors** : Jochen H Weishaupt, Claudia Bartels, Esther Pölking, Jeannine Dietrich, Gundula Rohde, Burkhard Poeggeler, Nina Mertens, Swetlana Sperling, Matthias Bohn, Gerald Hüther, Armin Schneider, Alfred Bach, Anna-Leena Sirén, Rüdiger Hardeland, Mathias Bähr, Klaus-Armin Nave, Hannelore Ehrenreich

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Melatonin](#) : CK(946) : AC(304)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## Melatonin or knockdown of CDK5 reduced MPTP-induced SNCA/ $\alpha$ -synuclein aggregation in mice, which is widely thought to trigger the pathogenesis of PD.

**Pubmed Data** : Autophagy. 2015 Aug 20:0. Epub 2015 Aug 20. PMID: [26292069](#)

**Article Published Date** : Aug 19, 2015

**Authors** : Ling-Yan Su, Hao Li, Li Lv, Yue-Mei Feng, Guo-Dong Li, Rongcan Luo, He-Jiang Zhou, Xiao-Guang Lei, Liang Ma, Jia-Li Li, Lin Xu, Xin-Tian Hu, Yong-Gang Yao

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Melatonin](#) : CK(946) : AC(304)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Autophagy Inhibitors](#) : CK(26) : AC(13), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Melatonin plays an important role in neural stem cells, including proliferation, differentiation and survival.

**Pubmed Data** : Mol Cell Endocrinol. 2015 Oct 20. Epub 2015 Oct 20. PMID: [26499395](#)

**Article Published Date** : Oct 19, 2015

**Authors** : Jiaqi Chu, Yalin Tu, Jingkao Chen, Dunxian Tan, Xingguo Liu, Rongbiao Pi

**Study Type** : Review

**Additional Links**

**Substances** : [Melatonin](#) : CK(946) : AC(304)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Melatonin significantly increased hippocampal synaptic density and the number of excitatory synapses, decreased the number of inhibitory synapses, and upregulated pre- and postsynaptic proteins.

**Pubmed Data** : J Pineal Res. 2015 May 19. Epub 2015 May 19. PMID: [25988948](#)

**Article Published Date** : May 18, 2015

**Authors** : Natalia A Stefanova, Kseniya Yi Maksimova, Elena Kiseleva, Ekaterina A Rudnitskaya, Natalia A Muraleva, Nataliya G Kolosova

**Study Type** : Animal Study

### Additional Links

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Inflammation: Brain : CK(6) : AC(3) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroplasticity enhancement : CK(44) : AC(12) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Melatonin significantly reduces AD neuropathology and associated cognitive deficits in a manner that is independent of antioxidant pathways.

**Pubmed Data** : Mol Neurodegener. 2015 ;10(1):27. Epub 2015 Jul 11. PMID: [26159703](#)

**Article Published Date** : Dec 31, 2014

**Authors** : G O'Neal-Moffitt, V Delic, P C Bradshaw, J Olcese

**Study Type** : Animal Study

### Additional Links

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Melatonin supplementation may have a therapeutic role in neurodegenerative disorders.

**Pubmed Data** : Front Biosci (Landmark Ed). 2014 ;19:429-46. Epub 2014 Jan 1. PMID: [24389194](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Giovanni Polimeni, Emanuela Esposito, Valentina Bevelacqua, Claudio Guarneri, Salvatore Cuzzocrea

**Study Type** : Review

### Additional Links

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Amyotrophic lateral sclerosis (ALS) : CK(566) :

## Melatonin treatment seems to constitute a selection therapy to ameliorate sundowning and to slow evolution of cognitive impairment in AD patients.

**Pubmed Data** : Neuro Endocrinol Lett. 2002 Apr ;23 Suppl 1:20-3. PMID: [12019347](#)

**Article Published Date** : Mar 31, 2002

**Authors** : Daniel P Cardinali, Luis I Brusco, Cynthia Liberczuk, Analía M Furio

**Study Type** : Review

**Additional Links**

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Neuroprotective Agents : CK(2235) : AC(1052)

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## Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : Clin Nutr. 2009 Dec;28(6):604-17. Epub 2009 Sep 25. PMID: [19782443](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Barkha P Patel, Mazen J Hamadeh

**Study Type** : Commentary

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), Carnitine : CK(434) : AC(66), Coenzyme Q10 : CK(941) : AC(140), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Folic Acid : CK(643) : AC(93), Ginkgo biloba : CK(796) : AC(161), Melatonin : CK(946) : AC(304), Red Wine Extract : CK(114) : AC(32), Vitamin E : CK(1656) : AC(290)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Supplementation of melatonin in combination with lower doses of AChEIs could be an interesting strategy for AD patients.

**Pubmed Data** : Mol Neurobiol. 2015 Jun 17. Epub 2015 Jun 17. PMID: [26081146](#)

**Article Published Date** : Jun 16, 2015

**Authors** : I Buendia, E Parada, E Navarro, R León, P Negredo, J Egea, M G López

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Melatonin : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Therapeutic Actions :** Integrative Medicine : CK(292) : AC(43)

**Pharmacological Actions :** Anti-Apoptotic : CK(360) : AC(201), Anti-Inflammatory Agents : CK(4499) : AC(1573), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords :** Dose Response : CK(1035) : AC(400), Natural Substance/Drug Synergy : CK(349) : AC(140)

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## The prevalence of cognitive impairment and depressed mood decreased with increases in physiological melatonin levels in this study.

**Pubmed Data :** J Clin Endocrinol Metab. 2015 Jun 8;jc20151859. Epub 2015 Jun 8. PMID: [26052727](#)

**Article Published Date :** Jun 07, 2015

**Authors :** Kenji Obayashi, Keigo Saeki, Junko Iwamoto, Nobuhiro Tone, Kunihiro Tanaka, Hiroshi Kataoka, Masayuki Morikawa, Norio Kurumatani

**Study Type :** Human Study

### Additional Links

**Substances :** Melatonin : CK(946) : AC(304)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375), Cognitive Decline/Dysfunction : CK(1138) : AC(212), Depressive Disorder : CK(405) : AC(57)

**Pharmacological Actions :** Antidepressive Agents : CK(986) : AC(157), Neuroprotective Agents : CK(2235) : AC(1052)

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## These results provide a new insight that the neuroprotective effect of melatonin against MPP+ toxicity.

**Pubmed Data :** J Pineal Res. 2016 May 9. Epub 2016 May 9. PMID: [27159033](#)

**Article Published Date :** May 08, 2016

**Authors :** Jih-Ing Chuang, I-Ling Pan, Chia-Yun Hsieh, Chiu-Ying Huang, Pei-Chun Chen, Jyh Wei Shin

**Study Type :** In Vitro Study

### Additional Links

**Substances :** Melatonin : CK(946) : AC(304)

**Diseases :** Brain: Oxidative Stress : CK(75) : AC(44), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions :** Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## This meta-analysis provided some evidence that melatonin improves sleep quality in patients with AD and PD.

**Pubmed Data :** Neurol Sci. 2015 Aug 9. Epub 2015 Aug 9. PMID: [26255301](#)

**Article Published Date** : Aug 08, 2015

**Authors** : Wei Zhang, Xue-Yan Chen, Su-Wen Su, Qing-Zhong Jia, Tao Ding, Zhong-Ning Zhu, Tong Zhang

**Study Type** : Meta Analysis

**Additional Links**

**Substances** : [Melatonin](#) : CK(946) : AC(304)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

---

## Melissa (Lemonbalm) (AC 1) (CK 10)

**Melissa officinalis extract has a therapeutic effect on patients with mild to moderate Alzheimer's disease.**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2003 Jul;74(7):863-6. PMID: [12810768](#)

**Article Published Date** : Jul 01, 2003

**Authors** : S Akhondzadeh, M Noroozian, M Mohammadi, S Ohadinia, A H Jamshidi, M Khani

**Study Type** : Human Study

**Additional Links**

**Substances** : [Melissa \(Lemonbalm\)](#) : CK(121) : AC(20)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Additional Keywords** : [Plant Extracts](#) : CK(7290) : AC(2420)

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## Milk Thistle (AC 1) (CK 1)

**This review article aims to present different aspects of Silybum marianum, especially the data in recently published articles about its effects on different diseases.**

**Pubmed Data** : J Evid Based Complementary Altern Med. 2015 Oct ;20(4):292-301. Epub 2015 Feb 16. PMID: [25686616](#)

**Article Published Date** : Sep 30, 2015

**Authors** : Mahmood Bahmani, Hedayatollah Shirzad, Samira Rafieian, Mahmoud Rafieian-Kopaei

**Study Type** : Review

**Additional Links**

**Substances** : Milk Thistle : CK(281) : AC(64)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cancers: All : CK(14297) : AC(4542) , Insulin Resistance : CK(1656) : AC(340) , Liver Cirrhosis : CK(375) : AC(55) , Liver Disease : CK(135) : AC(40)

**Pharmacological Actions** : Anti-atherogenic : CK(143) : AC(36) , Antioxidants : CK(7191) : AC(2630) , Cardiovascular Agents : CK(160) : AC(24) , Hepatoprotective : CK(1342) : AC(581) , Hypolipidemic : CK(1151) : AC(242) , Regenerative : CK(52) : AC(28)

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## Monounsaturated fatty acids (AC 1) (CK 10)

**High intake of polyunsaturated fatty acids (PUFA) and monounsaturated fatty acids (MUFA) reduce the risk of cognitive decline and dementia associated with Alzheimer's disease and/or vascular dysfunction.**

**Pubmed Data** : Exp Gerontol. 2005 Apr;40(4):257-70. PMID: [15820606](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Vincenzo Solfrizzi, Alessia D'Introno, Anna M Colacicco, Cristiano Capurso, Angelo Del Parigi, Sabrina Capurso, Annamaria Gadaleta, Antonio Capurso, Francesco Panza

**Study Type** : Human Study

**Additional Links**

**Substances** : Monounsaturated fatty acids : CK(50) : AC(5) , Omega-3 Fatty Acids : CK(3268) : AC(387) , Polyunsaturated Fatty Acids (PUFAs) : CK(174) : AC(32)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cerebrovascular Disorders : CK(10) : AC(1)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## Moringa oleifera (AC 2) (CK 4)

**Moringa oleifera may provide protection against Alzheimer's disease in a rat model.**

**Pubmed Data** : Indian J Med Res. 2008 Dec;128(6):744-51. PMID: [19246799](#)

**Article Published Date** : Dec 01, 2008

**Authors** : R Ganguly, D Guha

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Moringa oleifera](#) : CK(150) : AC(73)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## The isothiocyanate isolated from *Moringa oleifera* shows potent anti-inflammatory activity in the treatment of murine sub-acute Parkinson's disease.

**Pubmed Data** : Rejuvenation Res. 2016 Jun 1. Epub 2016 Jun 1. PMID: [27245199](#)

**Article Published Date** : May 31, 2016

**Authors** : Sabrina Giacoppo, Soundara Rajan Thangavelu, Gina Rosalinda De Nicola, Renato Iori, Patrick Rollin, Placido Bramanti, Emanuela Mazzon

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Isothiocyanate](#) : CK(15) : AC(4), [Moringa oleifera](#) : CK(150) : AC(73)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574)

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## Mucuna pruriens (aka Velvet Beans) (AC 6) (CK 27)

### A naturally occurring L-Dopa rich plant extract of *Mucuna pruriens* was found to be an effective treatment for patients with Parkinson's disease.

**Pubmed Data** : J Altern Complement Med. 1995 Fall;1(3):249-55. PMID: [9395621](#)

**Article Published Date** : Sep 01, 1995

**Authors** : [No authors listed]

**Study Type** : Human Study

**Additional Links**

**Substances** : [Mucuna pruriens \(aka Velvet Beans\)](#) : CK(39) : AC(8)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

## Mucuna pruriens demonstrates antiparkinsonian activity superior to L-Dopa in a rodent model of Parkinson's disease.

**Pubmed Data** : Neurotox Res. 2009 Feb;15(2):111-22. Epub 2009 Feb 20. PMID: [19384573](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Sanjay Kasture, Silvia Pontis, Annalisa Pinna, Nicoletta Schintu, Liliana Spina, Rosanna Longoni, Nicola Simola, Mauro Ballero, Micaela Morelli

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Mucuna pruriens](#) (aka Velvet Beans) : CK(39) : AC(8)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

**Additional Keywords** : [Natural Substances Versus Drugs](#) : CK(1694) : AC(300)

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## Mucuna pruriens efficacy in treating Parkinson's disease may be independent of its levodopa content.

**Pubmed Data** : Phytother Res. 2004 Feb;18(2):97-101. PMID: [15022157](#)

**Article Published Date** : Feb 01, 2004

**Authors** : Bala V Manyam, Muralikrishnan Dhanasekaran, Theodore A Hare

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Mucuna pruriens](#) (aka Velvet Beans) : CK(39) : AC(8)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Mucuna pruriens has antioxidant and metal chelating activity independent of its levodopa content.

**Pubmed Data** : Phytother Res. 2008 Jan;22(1):6-11. PMID: [18064727](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Muralikrishnan Dhanasekaran, Binu Tharakan, Bala V Manyam

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Mucuna pruriens](#) (aka Velvet Beans) : CK(39) : AC(8)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Mucuna pruriens is effective in treating the symptoms of Parkinson's disease, without the concomitant increase in dyskinesias that occurs with conventional L-dopa preparations.

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2004 Dec;75(12):1672-7. PMID: [15548480](#)

**Article Published Date** : Dec 01, 2004

**Authors** : R Katzenschlager, A Evans, A Manson, P N Patsalos, N Ratnaraj, H Watt, L Timmermann, R Van der Giessen, A J Lees

**Study Type** : Human Study

**Additional Links**

**Substances** : [Mucuna pruriens \(aka Velvet Beans\)](#) : CK(39) : AC(8)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Mucuna pruriens is superior to levodopa as an antiparkinson and neurorestorative agent.

**Pubmed Data** : Phytother Res. 2004 Sep;18(9):706-12. PMID: [15478206](#)

**Article Published Date** : Sep 01, 2004

**Authors** : Bala V Manyam, Muralikrishnan Dhanasekaran, Theodore A Hare

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Mucuna pruriens \(aka Velvet Beans\)](#) : CK(39) : AC(8)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Muira Puama (AC 1) (CK 0)

### Muira Puama's anticholinesterase activity may be responsible for its traditional therapeutic role associated with cognition.

**Pubmed Data** : Pharmacol Biochem Behav. 2003 Jun;75(3):645-50. PMID: [12895682](#)

**Article Published Date** : Jun 01, 2003

**Authors** : Ionara Rodrigues Siqueira, Cíntia Fochesatto, Adriana Lourenço da Silva, Domingos Sávio Nunes, Ana Maria Battastini, Carlos Alexandre Netto, Elaine Elisabetsky

**Additional Links**

**Substances** : [Muira Puama](#) : CK(0) : AC(4)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Pharmacological Actions** : [Acetylcholinesterase Inhibitor](#) : CK(36) : AC(18)

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## Mulberry (AC 2) (CK 3)

### A form of reseveratrol from Mulberry protects against parkinsonian mimetic 6-hydroxydopamine.

**Pubmed Data** : Free Radic Biol Med. 2008 Oct 1;45(7):1019-26. Epub 2008 Jul 16. PMID: [18675900](#)

**Article Published Date** : Oct 01, 2008

**Authors** : Jianfei Chao, Man-Shan Yu, Yuen-Shan Ho, Mingfu Wang, Raymond Chuen-Chung Chang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Mulberry : CK(40) : AC(15), Resveratrol : CK(1232) : AC(737)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163), Parkinsonian Disorders : CK(15) : AC(4)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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### Mulberry fruit extract pre-treatment could substantially alleviate PC12 cells injury and downregulate expression of AD-related genes.

**Pubmed Data** : Evid Based Complement Alternat Med. 2014 ;2014:150617. Epub 2014 Dec 17. PMID: [25580148](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Nan Song, Hongpeng Yang, Wei Pang, Zhiwei Qie, Hao Lu, Long Tan, Haiqiang Li, Shoudan Sun, Fuzhi Lian, Chuan Qin, Yugang Jiang

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Mulberry : CK(40) : AC(15)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Gene Expression Regulation : CK(422) : AC(209), Plant Extracts : CK(7288) : AC(2419)

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## Multivitamin (AC 1) (CK 3)

### Ginkgo biloba and/or a multivitamin-multimineral supplement effected remarkable improvement in

## symptoms in this case report.

**Pubmed Data** : Glob Adv Health Med. 2014 Jul ;3(4):43-4. PMID: [25105077](#)

**Article Published Date** : Jun 30, 2014

**Authors** : Gary D Conrad

**Study Type** : Human: Case Report

### Additional Links

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161), [Multivitamin](#) : CK(257) : AC(25)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163), [Parkinsonian Disorders](#) : CK(15) : AC(4)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

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## NAC (N-acetyl-L-cysteine) (AC 3) (CK 22)

### A combination of nutrients improves cognitive functioning while decreasing Alzheimer disease neuropathology in an animal model.

**Pubmed Data** : PLoS One. 2010;5(11):e14015. Epub 2010 Nov 17. PMID: [21103342](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Anna Parachikova, Kim N Green, Curt Hendrix, Frank M LaFerla

**Study Type** : Animal Study

### Additional Links

**Substances** : [Alpha-Lipoic Acid](#) : CK(462) : AC(106), [B-complex](#) : CK(268) : AC(31), [Curcumin](#) : CK(4128) : AC(2171), [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312), [Folic Acid](#) : CK(643) : AC(93), [NAC \(N-acetyl-L-cysteine\)](#) : CK(295) : AC(72), [Piperine](#) : CK(114) : AC(60), [Vitamin C](#) : CK(1953) : AC(401)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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### A multi-vitamin/nutrient formula has therapeutic value in early-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Dement. 2008 Dec-2009 Jan;23(6):571-85. Epub 2008 Dec 1. PMID: [19047474](#)

**Article Published Date** : Dec 01, 2008

**Authors** : Amy Chan, James Paskavitz, Ruth Remington, Shelly Rasmussen, Thomas B Shea

**Study Type** : Human Study

**Additional Links**

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-6 : CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## A multi-vitamin/nutrient formula has therapeutic value in moderate-stage to later-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Demen. 2009 Feb-Mar;24(1):27-33. Epub 2008 Dec 3. PMID: [19056706](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Ruth Remington, Amy Chan, James Paskavitz, Thomas B Shea

**Study Type** : Human Study

**Additional Links**

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-12 : CK(770) : AC(103), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## Naringenin (AC 1) (CK 2)

### Curcumin and naringenin exhibit neuroprotective properties in an animal model of Parkinson's disease.

**Pubmed Data** : Free Radic Res. 2005 Oct;39(10):1119-25. PMID: [16298737](#)

**Article Published Date** : Oct 01, 2005

**Authors** : Virginia Zbarsky, Krishna P Datla, Shabnam Parkar, Deepal K Rai, Okezie I Aruoma, David T Dexter

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Naringenin : CK(53) : AC(37)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Niacin (AC 1) (CK 2)

### Nicotinamide restores cognition in Alzheimer's disease transgenic mice.

**Pubmed Data** : J Neurosci. 2008 Nov 5;28(45):11500-10. PMID: [18987186](#)

**Article Published Date** : Nov 05, 2008

**Authors** : Kim N Green, Joan S Steffan, Hilda Martinez-Coria, Xuemin Sun, Steven S Schreiber, Leslie Michels Thompson, Frank M LaFerla

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Niacin](#) : CK(200) : AC(30)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## Nicotinamide adenine dinucleotide (NADH) (AC 1) (CK 2)

### Nicotinamide mononucleotide could restore cognition in Alzheimer's disease rat model.

**Pubmed Data** : Brain Res. 2016 Apr 26. Epub 2016 Apr 26. PMID: [27130898](#)

**Article Published Date** : Apr 25, 2016

**Authors** : Xiaonan Wang, Xuejun Hu, Yang Yang, Toshihiro Takata, Takashi Sakurai

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Nicotinamide adenine dinucleotide \(NADH\)](#) : CK(31) : AC(4)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Brain: Oxidative Stress](#) : CK(75) : AC(44), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Apoptotic](#) : CK(2941) : AC(2062), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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# Nigella sativa (aka Black Seed) (AC 2) (CK 2)

## A review of neuropharmacology effects of nigella sativa and its main component, thymoquinone.

**Pubmed Data** : Phytother Res. 2016 May 11. Epub 2016 May 11. PMID: [27169925](#)

**Article Published Date** : May 10, 2016

**Authors** : Soheila Javidi, Bibi Marjan Razavi, Hossein Hosseinzadeh

**Study Type** : Review

### Additional Links

**Substances** : Nigella sativa (aka Black Seed) : CK(355) : AC(98) , Thymoquinone : CK(184) : AC(111)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## The evidence presented in this paper appears to be supporting the hypothesis that Nigella sativa can enhance learning and memory.

**Pubmed Data** : Evid Based Complement Alternat Med. 2016 ;2016:6075679. Epub 2016 Feb 28. PMID: [27022403](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Mohamad Khairul Azali Sahak, Nurul Kabir, Ghulam Abbas, Suhaimi Draman, Noor Hashida Hashim, Durriyyah Sharifah Hasan Adli

**Study Type** : Review

### Additional Links

**Substances** : Nigella sativa (aka Black Seed) : CK(355) : AC(98) , Thymoquinone : CK(184) : AC(111)

**Diseases** : Memory Disorders : CK(340) : AC(103) , Neurodegenerative Diseases : CK(3370) : AC(846), Traumatic Brain Injury : CK(33) : AC(9)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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# Nobiletin (AC 8) (CK 13)

## Nchinpi extracts potently facilitated CRE-mediated

## transcription in cultured hippocampal neurons.

**Pubmed Data** : J Neural Transm. 2013 Oct ;120(10):1397-409. Epub 2013 Apr 16. PMID: [23588349](#)

**Article Published Date** : Sep 30, 2013

**Authors** : Ichiro Kawahata, Masaaki Yoshida, Wen Sun, Akira Nakajima, Yanxin Lai, Naoya Osaka, Kentaro Matsuzaki, Akihito Yokosuka, Yoshihiro Mimaki, Akira Naganuma, Yoshihisa Tomioka, Tohru Yamakuni

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Citrus Peel : CK(65) : AC(8), Nobiletin : CK(34) : AC(1), Orange: Mandarin : CK(6) : AC(2), Tangeretin : CK(17) : AC(9)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79), Learning disorders : CK(188) : AC(50), Neurologic Disorders : CK(65) : AC(29)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Plant Extracts : CK(7288) : AC(2419)

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## Nobiletin exhibited memory-improving effects in various animal models of dementia and exerted a wide range of beneficial effects against pathological features of AD.

**Pubmed Data** : Clin Psychopharmacol Neurosci. 2014 Aug ;12(2):75-82. Epub 2014 Aug 12. PMID: [25191498](#)

**Article Published Date** : Jul 31, 2014

**Authors** : Akira Nakajima, Yasushi Ohizumi, Kiyofumi Yamada

**Study Type** : Review

**Additional Links**

**Substances** : Nobiletin : CK(34) : AC(1)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Dementia : CK(571) : AC(79), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## Nobiletin prevents memory impairment and exhibits a protecting action against neurodegeneration in a alzheimer's disease model.

**Pubmed Data** : Yakugaku Zasshi. 2015 ;135(3):449-64. PMID: [25759053](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Yasushi Ohizumi

**Study Type** : Animal Study

**Additional Links**

**Substances** : Citrus Peel : CK(65) : AC(8), Nobiletin : CK(34) : AC(1)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Cognitive Decline/Dysfunction : CK(1138) :

## Nobiletin promoted NEP gene and protein expression, resulting in enhancement of cellular NEP activity in SK-N-SH cells.

**Pubmed Data** : Can J Physiol Pharmacol. 2014 May ;92(5):351-5. Epub 2014 Mar 7. PMID:

[24784468](#)

**Article Published Date** : Apr 30, 2014

**Authors** : Hironori Fujiwara, Junko Kimura, Masahiro Sakamoto, Akihito Yokosuka, Yoshihiro Mimaki, Kiyoshi Murata, Kikuji Yamaguchi, Yasushi Ohizumi

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Nobiletin : CK(34) : AC(1)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), MicroRNA modulator : CK(260) : AC(142), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Dose Response : CK(1035) : AC(400), Gene Expression Regulation : CK(422) : AC(209)

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## Nobiletin reduced the levels of soluble A $\beta$ 1-40 in the brain of 3XTg-AD mice and reduced ROS levels in the hippocampus of 3XTg-AD as well as wild-type mice.

**Pubmed Data** : Behav Brain Res. 2015 Aug 1 ;289:69-77. Epub 2015 Apr 22. PMID: [25913833](#)

**Article Published Date** : Jul 31, 2015

**Authors** : Akira Nakajima, Yuki Aoyama, Eun-Joo Shin, Yunsung Nam, Hyoung-Chun Kim, Taku Nagai, Akihito Yokosuka, Yoshihiro Mimaki, Tsuyoshi Yokoi, Yasushi Ohizumi, Kiyofumi Yamada

**Study Type** : Animal Study, Transgenic Animal Study

**Additional Links**

**Substances** : Citrus Peel : CK(65) : AC(8), Nobiletin : CK(34) : AC(1)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Disease Reversal : CK(65) : AC(17)

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## Nobiletin rescues motor and cognitive dysfunction in a MPTP-induced Parkinson model mice, in part by enhancing dopamine release.

**Pubmed Data** : Neuroscience. 2014 Feb 14 ;259:126-41. Epub 2013 Dec 4. PMID: [24316474](#)

**Article Published Date** : Feb 13, 2014

**Authors** : Y Yabuki, Y Ohizumi, A Yokosuka, Y Mimaki, K Fukunaga

**Study Type** : Animal Study

**Additional Links**

**Substances** : Nobiletin : CK(34) : AC(1)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Parkinson's Disease : CK(525) : AC(163), Parkinsonian Disorders : CK(15) : AC(4)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Significant Treatment Outcome : CK(3028) : AC(365)

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## Supplementation with nobiletin may protect against the neurodegeneration involved in PD.

**Pubmed Data** : J Med Food. 2015 Apr ;18(4):409-14. Epub 2014 Oct 17. PMID: [25325362](#)

**Article Published Date** : Mar 31, 2015

**Authors** : Kyoung Hoon Jeong, Min-Tae Jeon, Heung Deok Kim, Un Ju Jung, Min Cheol Jang, Jin Woo Chu, Seung Jun Yang, Il Yoon Choi, Myung-Sook Choi, Sang Ryong Kim

**Study Type** : Animal Study

**Additional Links**

**Substances** : Nobiletin : CK(34) : AC(1)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Tangerine peel possesses potent anti-neuroinflammatory capacity which is attributed to the collective effect of hesperidin, nobiletin, and tangeretin.

**Pubmed Data** : Food Chem Toxicol. 2014 Sep ;71:176-82. Epub 2014 Jun 20. PMID: [24955543](#)

**Article Published Date** : Aug 31, 2014

**Authors** : Su-Chen Ho, Chun-Ting Kuo

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Citrus Peel : CK(65) : AC(8), Hesperidin : CK(196) : AC(53), Nobiletin : CK(34) : AC(1), Tangeretin : CK(17) : AC(9)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Inflammation : CK(2863) : AC(839), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Interleukin-1 beta downregulation : CK(452) : AC(199), Interleukin-6 Downregulation : CK(1078) : AC(337), Neuroprotective Agents : CK(2235) : AC(1052), Nitric Oxide Inhibitor : CK(223) : AC(108), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Plant Extracts : CK(7288) : AC(2419)

## Noni (AC 1) (CK 2)

### Morinda citrifolia can be used to alleviate skeletal muscle damage induced by Parkinsonism.

**Pubmed Data** : Food Funct. 2015 Dec 23. Epub 2015 Dec 23. PMID: [26697948](#)

**Article Published Date** : Dec 22, 2015

**Authors** : Kishore Kumar S Narasimhan, Liya Paul, Yogesh Kanna Sathyamoorthy, Ashokkumar Srinivasan, Lakshmi Narasimhan Chakrapani, Abhilasha Singh, Divya Bhavani Ravi, Thulasi Raman Krishnan, Prema Velusamy, Kathiravan Kaliappan, Rameshkumar Radhakrishnan, Kalaiselvi Periandavan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Noni : CK(122) : AC(55)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Antioxidants : CK(7192) : AC(2631)

## Okra (AC 1) (CK 1)

### Okra may be beneficial in people expressing the H63D variant to reduce the risk of AD and other neurodegenerative diseases.

**Pubmed Data** : Neurosci Lett. 2015 Aug 31 ;603:6-11. Epub 2015 Jul 10. PMID: [26170247](#)

**Article Published Date** : Aug 30, 2015

**Authors** : Nootchanat Mairuae, James R Connor, Sang Y Lee, Poonlarp Cheepsunthorn, Walaiporn Tongjaroenbuangam

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Okra : CK(12) : AC(2)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Glycogen synthase kinase-3beta (GSK-3beta) Inhibitor : CK(14) : AC(4)

## Oleocanthal (AC 1) (CK 5)

**Findings from in vivo and in vitro studies provide further support for the protective effect of Oleocanthal against the progression of Alzheimer's Disease.**

**Pubmed Data :** ACS Chem Neurosci. 2015 Sep 16. Epub 2015 Sep 16. PMID: [26348065](#)

**Article Published Date :** Sep 15, 2015

**Authors :** Hisham Qosa, Yazan S Batarseh, Mohamed M Mohyeldin, Khalid A El Sayed, Jeffrey N Keller, Amal Kaddoumi

**Study Type :** Animal Study, Human In Vitro

### **Additional Links**

**Substances :** [Oleocanthal : CK\(10\) : AC\(6\)](#) , [Olive Oil : CK\(245\) : AC\(50\)](#)

**Diseases :** [Alzheimer's Disease : CK\(1282\) : AC\(375\)](#)

**Pharmacological Actions :** [Anti-Inflammatory Agents : CK\(4500\) : AC\(1574\)](#) , [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#)

**Additional Keywords :** [Blood Brain Barrier : CK\(32\) : AC\(12\)](#)

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## Olive Oil (AC 4) (CK 9)

**Findings from in vivo and in vitro studies provide further support for the protective effect of Oleocanthal against the progression of Alzheimer's Disease.**

**Pubmed Data :** ACS Chem Neurosci. 2015 Sep 16. Epub 2015 Sep 16. PMID: [26348065](#)

**Article Published Date :** Sep 15, 2015

**Authors :** Hisham Qosa, Yazan S Batarseh, Mohamed M Mohyeldin, Khalid A El Sayed, Jeffrey N Keller, Amal Kaddoumi

**Study Type :** Animal Study, Human In Vitro

### **Additional Links**

**Substances :** [Oleocanthal : CK\(10\) : AC\(6\)](#) , [Olive Oil : CK\(245\) : AC\(50\)](#)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Blood Brain Barrier : CK(32) : AC(12)

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## Olive oil phenols could be promising multi-targeting agents against Alzheimer's disease.

**Pubmed Data** : Adv Exp Med Biol. 2015 ;863:1-20. PMID: [26092624](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Stefania Rigacci

**Study Type** : Review

**Additional Links**

**Substances** : Olive Oil : CK(245) : AC(50)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## The in vitro and in vivo neuroprotective effects together with its multiple mechanisms of action are reviewed here.

**Pubmed Data** : Molecules. 2015 ;20(3):4655-80. Epub 2015 Mar 13. PMID: [25781069](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Jose Rodríguez-Morató, Laura Xicota, Montse Fitó, Magí Farré, Mara Dierssen, Rafael de la Torre

**Study Type** : Review

**Additional Links**

**Substances** : Olive Oil : CK(245) : AC(50)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

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## The results of this study suggest that the long-term consumption of EVOO-containing diet starting at early age provides a protective effect against AD and its related disorder CAA.

**Pubmed Data** : J Nutr Biochem. 2015 Aug 13. Epub 2015 Aug 13. PMID: [26344778](#)

**Article Published Date** : Aug 12, 2015

**Authors** : Hisham Qosa, Loqman A Mohamed, Yazan S Batarseh, Saeed Alqahtani, Baher Ibrahim, Harry LeVine, Jeffrey N Keller, Amal Kaddoumi

**Study Type** : Transgenic Animal Study

#### Additional Links

**Substances** : [Olive Oil](#) : CK(245) : AC(50)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Dietary Modification](#) : CK(315) : AC(47)

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## Omega-3 Fatty Acids (AC 3) (CK 21)

**High intake of polyunsaturated fatty acids (PUFA) and monounsaturated fatty acids (MUFA) reduce the risk of cognitive decline and dementia associated with Alzheimer's disease and/or vascular dysfunction.**

**Pubmed Data** : Exp Gerontol. 2005 Apr;40(4):257-70. PMID: [15820606](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Vincenzo Solfrizzi, Alessia D'Introno, Anna M Colacicco, Cristiano Capurso, Angelo Del Parigi, Sabrina Capurso, Annamaria Gadaleta, Antonio Capurso, Francesco Panza

**Study Type** : Human Study

#### Additional Links

**Substances** : [Monounsaturated fatty acids](#) : CK(50) : AC(5), [Omega-3 Fatty Acids](#) : CK(3268) : AC(387), [Polyunsaturated Fatty Acids \(PUFAs\)](#) : CK(174) : AC(32)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376), [Cerebrovascular Disorders](#) : CK(10) : AC(1)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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**Omega-3 FA intake combined with aerobic exercise and cognitive stimulation prevents atrophy in AD-related brain regions in MCI patients.**

**Pubmed Data** : Neuroimage. 2016 May 1 ;131:226-38. Epub 2015 Oct 1. PMID: [26433119](#)

**Article Published Date** : Apr 30, 2016

**Authors** : Theresa Köbe, A Veronica Witte, Ariane Schnelle, Anne Lesemann, Sonja Fabian, Valentina A Tesky, Johannes Pantel, Agnes Flöel

**Study Type** : Human Study

#### Additional Links

**Substances** : [Omega-3 Fatty Acids](#) : CK(3268) : AC(387)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Therapeutic Actions** : [Exercise: Aerobic](#) : CK(147) : AC(17), [Integrative Medicine](#) : CK(292) : AC(43)

## The present review discusses the mitochondrial restorative mechanisms of these bioenergetics and antioxidants as a potential alternative drug strategy for effective management of AD.

**Pubmed Data :** Front Pharmacol. 2015 ;6:206. Epub 2015 Sep 24. PMID: [26441662](#)

**Article Published Date :** Dec 31, 2014

**Authors :** Anil Kumar, Arti Singh

**Study Type :** Review

### **Additional Links**

**Substances :** Curcumin : CK(4128) : AC(2171), Ginkgo biloba : CK(796) : AC(161), Omega-3 Fatty Acids : CK(3268) : AC(387)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375), Mitochondrial Dysfunction : CK(224) : AC(90), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions :** Neuroprotective Agents : CK(2235) : AC(1052)

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## Orange: Mandarin (AC 1) (CK 1)

### Nchinpi extracts potently facilitated CRE-mediated transcription in cultured hippocampal neurons.

**Pubmed Data :** J Neural Transm. 2013 Oct ;120(10):1397-409. Epub 2013 Apr 16. PMID: [23588349](#)

**Article Published Date :** Sep 30, 2013

**Authors :** Ichiro Kawahata, Masaaki Yoshida, Wen Sun, Akira Nakajima, Yanxin Lai, Naoya Osaka, Kentaro Matsuzaki, Akihito Yokosuka, Yoshihiro Mimaki, Akira Naganuma, Yoshihisa Tomioka, Tohru Yamakuni

**Study Type :** In Vitro Study

### **Additional Links**

**Substances :** Citrus Peel : CK(65) : AC(8), Nobiletin : CK(34) : AC(1), Orange: Mandarin : CK(6) : AC(2), Tangeretin : CK(17) : AC(9)

**Diseases :** Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79), Learning disorders : CK(188) : AC(50), Neurologic Disorders : CK(65) : AC(29)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords :** Natural Substance Synergy : CK(534) : AC(244), Plant Extracts : CK(7288) : AC(2419)

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## Panax Ginseng (AC 1) (CK 1)

### Effects of Panax ginseng in Neurodegenerative Diseases.

**Pubmed Data** : J Ginseng Res. 2012 Oct ;36(4):342-53. PMID: [23717136](#)

**Article Published Date** : Sep 30, 2012

**Authors** : Ik-Hyun Cho

**Study Type** : Review

#### Additional Links

**Substances** : Panax Ginseng : CK(60) : AC(29)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140), Huntington Disease : CK(84) : AC(32) , Multiple Sclerosis : CK(953) : AC(182) , Neurodegenerative Diseases : CK(3370) : AC(846)

## Panax Notoginseng (AC 1) (CK 2)

### Saponins extracted from Panax notoginseng protect against herbicide induced neurotoxicity.

**Pubmed Data** : J Ethnopharmacol. 2010 Feb 3;127(2):419-23. Epub 2009 Oct 24. PMID: [19857566](#)

**Article Published Date** : Feb 03, 2010

**Authors** : Fu-Cheng Luo, Sheng-Dong Wang, Kui Li, Hajime Nakamura, Junji Yodoi, Jie Bai

**Study Type** : Animal Study

#### Additional Links

**Substances** : Ginsenosides : CK(69) : AC(28) , Panax Notoginseng : CK(42) : AC(9)

**Diseases** : Herbicide Toxicity : CK(4) : AC(2) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

## Papaya (AC 1) (CK 1)

## Fermented papaya preparation may have a number of therapeutic applications in the prevention of chronic and degenerative disease conditions.

**Pubmed Data** : Toxicology. 2010 Sep 23. Epub 2010 Sep 23. PMID: [20870007](#)

**Article Published Date** : Sep 23, 2010

**Authors** : Okezie I Aruoma, Yuki Hayashi, Francesco Marotta, Pierre Mantello, Eliezer Rachmilewitz, Luc Montagnier

**Study Type** : Review

**Additional Links**

**Substances** : [Fermented Foods and Beverages](#) : CK(864) : AC(194) , [Papaya](#) : CK(105) : AC(45)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573) , [Antioxidants](#) : CK(7191) : AC(2630)

## Papaya: Fermented (AC 1) (CK 10)

### Fermented papaya has antioxidant actions in AD patients and that it may be a prophylactic food against neurological diseases associated with free radical overproduction.

**Pubmed Data** : Mediators Inflamm. 2015 ;2015:624801. Epub 2015 Apr 7. PMID: [25944987](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Mario Barbagallo, Francesco Marotta, Ligia J Dominguez

**Study Type** : Human Study

**Additional Links**

**Substances** : [Papaya: Fermented](#) : CK(12) : AC(2)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

## Patchouli (AC 1) (CK 1)

### Patchouli inhibits reactive oxygen species (ROS) induced neuroglial cell injury.

**Pubmed Data** : Evid Based Complement Alternat Med. 2008 Jan 7. Epub 2008 Jan 7. PMID: [18955302](#)

**Article Published Date** : Jan 07, 2008

**Authors** : Hyung Woo Kim, Su Jin Cho, Bu-Yeo Kim, Su In Cho, Young Kyun Kim

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : Patchouli : CK(16) : AC(6)

**Diseases** : Brain Damage : CK(93) : AC(44), Brain Diseases : CK(19) : AC(8), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

## Peony (AC 1) (CK 2)

### A combination of ginger and peony root may prevent memory impairment in AD by inhibiting A $\beta$ accumulation and inflammation in the brain.

**Pubmed Data** : J Alzheimers Dis. 2015 Nov 30. Epub 2015 Nov 30. PMID: [26639976](#)

**Article Published Date** : Nov 29, 2015

**Authors** : Soonmin Lim, Jin Gyu Choi, Minho Moon, Hyo Geun Kim, Wonil Lee, Hyoung-Rok Bak, Hachang Sung, Chi Hye Park, Sun Yeou Kim, Myung Sook Oh

**Study Type** : Transgenic Animal Study

#### Additional Links

**Substances** : Ginger : CK(676) : AC(175), Peony : CK(50) : AC(14)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Cyclooxygenase 2 Inhibitors : CK(448) : AC(267)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

## Persimmon (AC 2) (CK 3)

**Flavonoids from persimmon leaves may have a therapeutic role in preventing and treating brain injuries and/or inflammation.**

**Pubmed Data** : Zhong Yao Cai. 2009 May;32(5):740-4. PMID: [19771850](#)

**Article Published Date** : May 01, 2009

**Authors** : Wei-Jian Bei, An-Long Xu, Chu-Yuan Li, Peter J Cabot, Siobhan Hermanussen

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Persimmon : CK(30) : AC(14)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Brain Injury: Traumatic : CK(99) : AC(30) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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**Persimmon leaf extract may be useful for the prevention and treatment of ischemia/reperfusion injury and other related neurodegenerative diseases.**

**Pubmed Data** : J Ethnopharmacol. 2009 Oct 29;126(1):134-42. Epub 2009 Aug 7. PMID: [19665536](#)

**Article Published Date** : Oct 29, 2009

**Authors** : Weijian Bei, Linqun Zang, Jiao Guo, Wenlie Peng, Anlong Xu, David A Good, Yinming Hu, Wei Wu, Dehui Hu, Xinghong Zhu, Ming Wei, Chuyuan Li

**Study Type** : Animal Study

**Additional Links**

**Substances** : Persimmon : CK(30) : AC(14)

**Diseases** : Brain Ischemia : CK(136) : AC(52) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Phosphatidylserine (AC 2) (CK 12)

**Phosphatidylserine and curcumin can ameliorate**

## scopolamine-induced amnesia and may be useful treatments for Alzheimer's disease.

**Pubmed Data** : Behav Pharmacol. 2016 Jul 6. Epub 2016 Jul 6. PMID: [27388114](#)

**Article Published Date** : Jul 05, 2016

**Authors** : Teresa A Barber, Edward M Edris, Paul J Levinsky, Justin M Williams, Ari R Brouwer, Shawn A Gessay

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Phosphatidylserine : CK(134) : AC(20)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amnesia: Drug-Induced : CK(13) : AC(8)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Phosphatidylserine has a therapeutic effect in Alzheimer's disease.

**Pubmed Data** : Psychopharmacol Bull. 1992;28(1):61-6. PMID: [1609044](#)

**Article Published Date** : Jan 01, 1992

**Authors** : T Crook, W Petrie, C Wells, D C Massari

**Study Type** : Human Study

**Additional Links**

**Substances** : Phosphatidylserine : CK(134) : AC(20)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## Phytate (AC 1) (CK 1)

### Pineal gland calcification may contribute to the pathogenesis of Alzheimer's disease and may reflect an absence of crystallization inhibitors.

**Pubmed Data** : Taehan Kanho Hakhoe Chi. 2007 Apr;37(3):276-85. PMID: [19666212](#)

**Article Published Date** : Apr 01, 2007

**Authors** : Fèlix Grases, Antònia Costa-Bauzà, Rafael M Prieto

**Study Type** : Review

**Additional Links**

**Substances** : Phytate : CK(9) : AC(9)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Pineal Gland Calcification : CK(230) : AC(29)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235)

## Piceatannol (AC 2) (CK 3)

### Antioxidants inhibit neuronal toxicity in leucine-rich repeat kinase-2-linked Parkinson's disease.

**Pubmed Data** : Ann Clin Transl Neurol. 2016 Apr ;3(4):288-94. Epub 2016 Mar 2. PMID: [27081659](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Dario C Angeles, Patrick Ho, Brian W Dymock, Kah-Leong Lim, Zhi-Dong Zhou, Eng-King Tan

**Study Type** : Animal Study, In Vitro Study

#### Additional Links

**Substances** : Piceatannol : CK(5) : AC(3), Thymoquinone : CK(184) : AC(111)

**Diseases** : Oxidative Stress : CK(3800) : AC(1357), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

### Piceatannol and pterostilbene have protective effects against A $\beta$ -induced apoptosis in PC12 cells.

**Pubmed Data** : Food Funct. 2016 Jan 13. Epub 2016 Jan 13. PMID: [26757883](#)

**Article Published Date** : Jan 12, 2016

**Authors** : Zheng Fu, Jiufang Yang, Yangji Wei, Jingming Li

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : Piceatannol : CK(5) : AC(3), Pterostilbene : CK(88) : AC(52)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Neuroprotective Agents : CK(2237) : AC(1053)

## Piperidines (AC 1) (CK 10)

## Ginkgo biloba compares favorably to the drug Aricept (donepezil) for the treatment of Alzheimer's dementia.

**Pubmed Data** : Eur J Neurol. 2006 Sep;13(9):981-5. PMID: [16930364](#)

**Article Published Date** : Sep 01, 2006

**Authors** : M Mazza, A Capuano, P Bria, S Mazza

**Study Type** : Human Study

### Additional Links

**Substances** : Ginkgo biloba : CK(796) : AC(161), Piperidines : CK(59) : AC(22)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Dementia : CK(571) : AC(79)

**Additional Keywords** : Donepezil Alternatives : CK(20) : AC(2), Natural Substances Versus Drugs : CK(1694) : AC(300), Plant Extracts : CK(7290) : AC(2420)

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## Piperine (AC 2) (CK 4)

### A combination of nutrients improves cognitive functioning while decreasing Alzheimer disease neuropathology in an animal model.

**Pubmed Data** : PLoS One. 2010;5(11):e14015. Epub 2010 Nov 17. PMID: [21103342](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Anna Parachikova, Kim N Green, Curt Hendrix, Frank M LaFerla

**Study Type** : Animal Study

### Additional Links

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106), B-complex : CK(268) : AC(31), Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), Piperine : CK(114) : AC(60), Vitamin C : CK(1953) : AC(401)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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### Piperine, the main alkaloid of Thai black pepper, protects against neurodegeneration and cognitive impairment in an animal model.

**Pubmed Data** : Food Chem Toxicol. 2009 Dec 23. Epub 2009 Dec 23. PMID: [20034530](#)

**Article Published Date** : Dec 23, 2009

**Authors** : [No authors listed]

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Black Pepper](#) : CK(229) : AC(96), [Piperine](#) : CK(114) : AC(60)

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Plum (AC 1) (CK 2)

**Incorporating polyphenol-enriched Oriental plum into a high-cholesterol diet can ameliorate some of the symptoms of neurodegenerative conditions.**

**Pubmed Data** : Br J Nutr. 2015 Apr 13:1-8. Epub 2015 Apr 13. PMID: [25866056](#)

**Article Published Date** : Apr 12, 2015

**Authors** : Ping-Hui Kuo, Ching-I Lin, Yue-Hwa Chen, Wan-Chun Chiu, Shyh-Hsiang Lin

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Plum](#) : CK(33) : AC(9), [Polyphenols](#) : CK(920) : AC(333)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [High Cholesterol](#) : CK(1754) : AC(265), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Hypolipidemic](#) : CK(1151) : AC(242), [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Policosanols (AC 1) (CK 1)

**A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.**

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type :** Commentary

**Additional Links**

**Substances :** Chromium : CK(56) : AC(12) , Cinnamon : CK(243) : AC(88) , Cocoa : CK(522) : AC(77) , DHA (Docosahexaenoic Acid) : CK(783) : AC(129) , Fish Oil : CK(701) : AC(111) , Folic Acid : CK(643) : AC(93) , Genistein : CK(515) : AC(228) , Hops : CK(76) : AC(26) , Policosanol : CK(194) : AC(25) , Sesame Seeds : CK(235) : AC(71) , Vitamin D : CK(3113) : AC(441)

**Diseases :** Alzheimer's Disease : CK(1283) : AC(376) , Neurodegenerative Diseases : CK(3370) : AC(846)

## Polyphenols (AC 20) (CK 25)

### A review of phytochemicals and their neuroprotective effects in the treatment of dementia.

**Pubmed Data :** Molecules. 2016 ;21(4). Epub 2016 Apr 21. PMID: [27110749](#)

**Article Published Date :** Dec 31, 2015

**Authors :** Rosaliana Libro, Sabrina Giacoppo, Thangavelu Soundara Rajan, Placido Bramanti, Emanuela Mazzon

**Study Type :** Review

**Additional Links**

**Substances :** Cannabidiol : CK(1112) : AC(334) , Cannabinoids : CK(700) : AC(272) , Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375) , Dementia : CK(571) : AC(79)

**Pharmacological Actions :** Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords :** Risk Reduction : CK(6136) : AC(658)

### A review of walnut polyphenols in health maintenance and disease prevention.

**Pubmed Data :** Crit Rev Food Sci Nutr. 2015 Dec 29;0. Epub 2015 Dec 29. PMID: [26713565](#)

**Article Published Date :** Dec 28, 2015

**Authors :** Claudia Sánchez-González, Maria Izquierdo-Pulido

**Study Type :** Review

**Additional Links**

**Substances :** Polyphenols : CK(920) : AC(333) , Walnut : CK(187) : AC(43)

**Diseases :** Cancers: All : CK(14297) : AC(4542) , Cardiovascular Diseases : CK(7018) : AC(887) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630)

## Both curcumin and its metabolite tetrahydrocurcumin exert neuroprotection against chemically-induced neurotoxicity.

**Pubmed Data** : Inflammopharmacology. 2008 Apr;16(2):96-9. PMID: [18408903](#)

**Article Published Date** : Apr 01, 2008

**Authors** : A Rajeswari, M Sabesan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Tetrahydrocurcumin : CK(66) : AC(30)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Defined cocktails of dietary factors at low concentrations might be a suitable strategy to reduce oxidative damage in neurodegenerative diseases.

**Pubmed Data** : Oxid Med Cell Longev. 2015;2015:217258. Epub 2015 Jul 8. PMID: [26236423](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Flavio Amara, Miluscia Berbenni, Martina Fragni, Giampaolo Leoni, Sandra Viggiani, Vita Maria Ippolito, Marilena Larocca, Rocco Rossano, Lilia Alberghina, Paolo Riccio, Anna Maria Colangelo

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Antioxidant formulas : CK(492) : AC(76), Carotenoids : CK(1620) : AC(306), Polyphenols : CK(920) : AC(333)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Dietary Concentrations : CK(85) : AC(22), Natural Substance Synergy : CK(534) : AC(244), Plant Extracts : CK(7288) : AC(2419)

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## Effects of natural antioxidants in neurodegenerative disease.

**Pubmed Data** : Nutr Neurosci. 2012 Jan ;15(1):1-9. PMID: [22305647](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Sonia Luz Albarracin, Ben Stab, Zulma Casas, Jhon Jairo Sutachan, Ismael Samudio, Janneth Gonzalez, Luis Gonzalo, Francisco Capani, Ludis Morales, George E Barreto

**Study Type** : Review

### Additional Links

**Substances** : [Antioxidant formulas](#) : CK(492) : AC(76) , [Polyphenols](#) : CK(920) : AC(333)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Extracts enriched in polyphenols showed promising neuroprotective effects.

**Pubmed Data** : Curr Top Med Chem. 2016 Feb 4. Epub 2016 Feb 4. PMID: [26845551](#)

**Article Published Date** : Feb 03, 2016

**Authors** : Carmela Spagnuolo, Marianna Napolitano, Idolo Tedesco, Stefania Moccia, Alfonsina Milito, Gian Luigi Russo

**Study Type** : Review

### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171) , [EGCG \(Epigallocatechin gallate\)](#) : CK(606) : AC(312) , [Elderberry](#) : CK(84) : AC(18) , [Polyphenols](#) : CK(920) : AC(333) , [Quercetin](#) : CK(557) : AC(246) , [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Brain Inflammation](#) : CK(246) : AC(140) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Flavonoids and n-3 polyunsaturated fatty acids are strong candidate in preventing neuroinflammation and modulating age-related memory decline.

**Pubmed Data** : Neurochem Int. 2015 Aug 7. Epub 2015 Aug 7. PMID: [26260547](#)

**Article Published Date** : Aug 06, 2015

**Authors** : David Vauzour, Anneloes Martinsen, Sophie Layé

**Study Type** : Review

### Additional Links

**Substances** : [Polyphenols](#) : CK(920) : AC(333) , [Polyunsaturated Fatty Acids \(PUFAs\)](#) : CK(174) : AC(32)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Grape seed extract has inhibiting effect on the accumulation of age-related oxidative DNA damages in

## the central nervous system of rats.

**Pubmed Data** : Brain Res Bull. 2006 Feb 15;68(6):469-73. Epub 2005 Nov 2. PMID: [16459205](#)

**Article Published Date** : Feb 15, 2006

**Authors** : Muthaiya Balu, Purushotham Sangeetha, Ganesan Murali, Chinnakannu Panneerselvam

**Study Type** : Animal Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333)

**Diseases** : Aging: Brain : CK(246) : AC(84), DNA damage : CK(969) : AC(377) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419) , Proanthocyanidins : CK(203) : AC(54)

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## Grape seed polyphenols and curcumin reduce genomic instability events in a transgenic mouse model for Alzheimer's disease.

**Pubmed Data** : Mutat Res. 2009 Feb 10;661(1-2):25-34. Epub 2008 Nov 6. PMID: [19027755](#)

**Article Published Date** : Feb 10, 2009

**Authors** : Philip Thomas, Yan-Jiang Wang, Jin-Hua Zhong, Shantha Kosaraju, Nathan J O'Callaghan, Xin-Fu Zhou, Michael Fenech

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Flavonoids : CK(1194) : AC(376) , Grapefruit Seed Extract : CK(37) : AC(14), Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Genoprotective : CK(259) : AC(95) , Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Incorporating polyphenol-enriched Oriental plum into a high-cholesterol diet can ameliorate some of the symptoms of neurodegenerative conditions.

**Pubmed Data** : Br J Nutr. 2015 Apr 13;118(1):1-8. Epub 2015 Apr 13. PMID: [25866056](#)

**Article Published Date** : Apr 12, 2015

**Authors** : Ping-Hui Kuo, Ching-I Lin, Yue-Hwa Chen, Wan-Chun Chiu, Shyh-Hsiang Lin

**Study Type** : Animal Study

**Additional Links**

**Substances** : Plum : CK(33) : AC(9) , Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , High Cholesterol : CK(1754) : AC(265) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Hypolipidemic : CK(1151) : AC(242) , Neuroprotective Agents : CK(2237)

## Moderate consumption of Cabernet Sauvignon attenuates Abeta neuropathology in a mouse model of Alzheimer's disease.

**Pubmed Data** : FASEB J. 2006 Nov;20(13):2313-20. PMID: [17077308](#)

**Article Published Date** : Nov 01, 2006

**Authors** : Jun Wang, Lap Ho, Zhong Zhao, Ilana Seror, Nelson Humala, Dara L Dickstein, Meenakshisundaram Thiyagarajan, Susan S Percival, Stephen T Talcott, Giulio Maria Pasinetti

**Study Type** : Animal Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333) , Wine : CK(197) : AC(44)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## Polyphenols or other phytochemicals appear to be potential and promising class of therapeutics for the treatment of diseases with a multifactorial etiology.

**Pubmed Data** : Pharmacogn Rev. 2012 Jul ;6(12):81-90. PMID: [23055633](#)

**Article Published Date** : Jun 30, 2012

**Authors** : G Phani Kumar, Farhath Khanum

**Study Type** : Review

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Dementia : CK(571) : AC(79) , Depression : CK(1820) : AC(263) , Neurodegenerative Diseases : CK(3370) : AC(846) , Psychiatric Disorders : CK(110) : AC(27) , Schizophrenia : CK(434) : AC(68)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## Polyphenols such as curcumin and EGCG from green tea may chelate out iron from the Alzheimers brain.

**Pubmed Data** : Prog Neurobiol. 2007 Aug;82(6):348-60. Epub 2007 Jun 19. PMID: [17659826](#)

**Article Published Date** : Aug 01, 2007

**Authors** : Silvia Mandel, Tamar Amit, Orit Bar-Am, Moussa B H Youdim

**Study Type** : Commentary

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Green Tea : CK(1934) : AC(549) , Polyphenols : CK(920) : AC(333)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Iron Overload : CK(31) : AC(17)

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## Resveratrol protects dopamine neurons against lipopolysaccharide-induced neurotoxicity.

**Pubmed Data** : Mol Pharmacol. 2010 Sep 1;78(3):466-77. Epub 2010 Jun 16. PMID: [20554604](#)

**Article Published Date** : Sep 01, 2010

**Authors** : Feng Zhang, Jing-Shan Shi, Hui Zhou, Belinda Wilson, Jau-Shyong Hong, Hui-Ming Gao

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Resveratrol : CK(1232) : AC(737)

**Diseases** : Brain: Microglial Activation : CK(82) : AC(53), Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216), Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Resveratrol's therapeutic properties in neurodegenerative conditions may be due to its gene protective and regulatory as well as antioxidant properties.

**Pubmed Data** : Neuropharmacology. 2008 Jun;54(7):1112-9. Epub 2008 Mar 16. PMID: [15956815](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Sylvain Doré

**Study Type** : Review

### Additional Links

**Substances** : Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Red Wine Extract : CK(114) : AC(32), Resveratrol : CK(1232) : AC(737), Wine : CK(197) : AC(44)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Review: Therapeutic potential of resveratrol in Alzheimer's disease.

**Pubmed Data** : BMC Neurosci. 2008;9 Suppl 2:S6. Epub 2008 Dec 3. PMID: [19090994](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Valérie Vingtdeux, Ute Dreses-Werringloer, Haitian Zhao, Peter Davies, Philippe

Marambaud

**Study Type** : Review

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376) , Polyphenols : CK(920) : AC(333) , Resveratrol : CK(1232) : AC(737)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## The additive and synergistic effects of phytochemicals in fruit and vegetables are responsible for their potent antioxidant and anticancer activities.

**Pubmed Data** : Am J Clin Nutr. 2003 Sep ;78(3 Suppl):517S-520S. PMID: [12936943](#)

**Article Published Date** : Aug 31, 2003

**Authors** : Rui Hai Liu

**Study Type** : Review

**Additional Links**

**Substances** : Fruit: All : CK(3530) : AC(769) , Polyphenols : CK(920) : AC(333) , Vegetables: All : CK(1032) : AC(113)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cancers: All : CK(14297) : AC(4542) , Cardiovascular Diseases : CK(7018) : AC(887)

**Pharmacological Actions** : Anticarcinogenic Agents : CK(1071) : AC(514) , Antioxidants : CK(7191) : AC(2630) , Cardioprotective : CK(1574) : AC(400)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244) , The Whole is Greater than the Parts : CK(1) : AC(1)

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## The present review addresses how these tea constituents work at the cellular level to render effective control of disease syndromes and suggests that tea synergizes with established drugs.

**Pubmed Data** : Neurochem Int. 2015 Aug 10. Epub 2015 Aug 10. PMID: [26271432](#)

**Article Published Date** : Aug 09, 2015

**Authors** : Debashis Dutta, Kochupurackal P Mohanakumar

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80) , Catechin : CK(512) : AC(169) , Green Tea : CK(1934) : AC(549) , Polyphenols : CK(920) : AC(333)

**Diseases** : Oxidative Stress : CK(3799) : AC(1356) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Natural Substance/Drug Synergy : CK(349) : AC(140)

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**This review collates the current knowledge of tea polyphenols and puts into perspective their potential to be considered as nutraceuticals that target various pathologies in PD.**

**Pubmed Data** : Adv Exp Med Biol. 2015;863:117-137. PMID: [26092629](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Mario Caruana, Neville Vassallo

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333), Tea : CK(1840) : AC(385), Theaflavins : CK(1) : AC(1)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59), Neuroprotective Agents : CK(2237) : AC(1053)

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**Whole-grape products are safer choices for better health and disease prevention. But for advanced disease conditions, individual grape ingredients or combinations appear to be better.**

**Pubmed Data** : Ann N Y Acad Sci. 2015 Jun 22. Epub 2015 Jun 22. PMID: [26099945](#)

**Article Published Date** : Jun 21, 2015

**Authors** : Chandra K Singh, Xiaoqi Liu, Nihal Ahmad

**Study Type** : Commentary

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114), Catechin : CK(512) : AC(169), Flavonoids : CK(1194) : AC(376), Grapes : CK(26) : AC(7), Polyphenols : CK(920) : AC(333), Resveratrol : CK(1232) : AC(737)

**Diseases** : Cancers: All : CK(14297) : AC(4542), Neurodegenerative Diseases : CK(3370) : AC(846)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Natural Substance Synergy : CK(534) : AC(244)

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**Polyunsaturated Fatty Acids (PUFAs)**  
**(AC 4) (CK 31)**

## A high intake of polyunsaturated fatty acids and vitamin E is associated with a 50-60% decreased risk of developing ALS.

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2007 Apr;78(4):367-71. Epub 2006 Apr 28. PMID: [16648143](#)

**Article Published Date** : Apr 01, 2007

**Authors** : J H Veldink, S Kalmijn, G-J Groeneveld, W Wunderink, A Koster, J H M de Vries, J van der Luyt, J H J Wokke, L H Van den Berg

**Study Type** : Human Study

**Additional Links**

**Substances** : Polyunsaturated Fatty Acids (PUFAs) : CK(174) : AC(32) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Flavonoids and n-3 polyunsaturated fatty acids are strong candidate in preventing neuroinflammation and modulating age-related memory decline.

**Pubmed Data** : Neurochem Int. 2015 Aug 7. Epub 2015 Aug 7. PMID: [26260547](#)

**Article Published Date** : Aug 06, 2015

**Authors** : David Vauzour, Anneloes Martinsen, Sophie Layé

**Study Type** : Review

**Additional Links**

**Substances** : Polyphenols : CK(920) : AC(333) , Polyunsaturated Fatty Acids (PUFAs) : CK(174) : AC(32)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## High intake of polyunsaturated fatty acids (PUFA) and monounsaturated fatty acids (MUFA) reduce the risk of cognitive decline and dementia associated with Alzheimer's disease and/or vascular dysfunction.

**Pubmed Data** : Exp Gerontol. 2005 Apr;40(4):257-70. PMID: [15820606](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Vincenzo Solfrizzi, Alessia D'Introno, Anna M Colacicco, Cristiano Capurso, Angelo Del Parigi, Sabrina Capurso, Annamaria Gadaleta, Antonio Capurso, Francesco Panza

**Study Type** : Human Study

#### Additional Links

**Substances** : Monounsaturated fatty acids : CK(50) : AC(5), Omega-3 Fatty Acids : CK(3268) : AC(387), Polyunsaturated Fatty Acids (PUFAs) : CK(174) : AC(32)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Cerebrovascular Disorders : CK(10) : AC(1)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## Higher intake of polyunsaturated fatty acids (PUFA) and fish oil was associated with better semantic memory and global cognitive function.

**Pubmed Data** : Int J Geriatr Psychiatry. 2008 Jul;23(7):741-7. PMID: [18188871](#)

**Article Published Date** : Jul 01, 2008

**Authors** : Marjo H Eskelinen, Tiia Ngandu, Eeva-Liisa Helkala, Jaakko Tuomilehto, Aulikki Nissinen, Hilikka Soininen, Miia Kivipelto

**Study Type** : Human Study

#### Additional Links

**Substances** : Polyunsaturated Fatty Acids (PUFAs) : CK(174) : AC(32)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Cognitive Decline/Dysfunction : CK(1138) : AC(212)

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## Pomegranate (AC 10) (CK 16)

### A nanoformulation of pomegranate seed oil can delay disease onset in a mouse model of genetic prion diseases.

**Pubmed Data** : Nanomedicine. 2014 Aug ;10(6):1353-63. Epub 2014 Apr 2. PMID: [24704590](#)

**Article Published Date** : Jul 31, 2014

**Authors** : Michal Mizrahi, Yael Friedman-Levi, Liraz Larush, Kati Frid, Orli Binyamin, Dvir Dori, Nina Fainstein, Haim Ovadia, Tamir Ben-Hur, Shlomo Magdassi, Ruth Gabizon

**Study Type** : Animal Study

#### Additional Links

**Substances** : Pomegranate : CK(499) : AC(168)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Creutzfeldt-Jakob disease : CK(27) : AC(9), Lipid Peroxidation : CK(692) : AC(252), Neurodegenerative Diseases : CK(3370) : AC(846), Prion Diseases : CK(10) : AC(7)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

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## Consumption of pomegranates improves synaptic function in a transgenic mice model of Alzheimer's disease.

**Pubmed Data** : Oncotarget. 2016 Jul 28. Epub 2016 Jul 28. PMID: [27486879](#)

**Article Published Date** : Jul 27, 2016

**Authors** : Nady Braidy, Musthafa Mohamed Essa, Anne Poljak, Selvaraju Subash, Samir Al-Adawi, Thamilarasan Manivasagm, Arokiasamy Justin Thenmozhi, Lezanne Ooi, Perminder Sachdev, Gilles Guillemin

**Study Type** : Animal Study

**Additional Links**

**Substances** : Pomegranate : CK(499) : AC(168)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Ellagic acid application could be a useful memory restorative agent in the treatment of dementia seen in elderly persons.

**Pubmed Data** : Pharm Biol. 2016 Feb 1:1-7. Epub 2016 Feb 1. PMID: [26828763](#)

**Article Published Date** : Jan 31, 2016

**Authors** : Mohammad Taghi Mansouri, Yaghoub Farbood, Bahareh Naghizadeh, Sohreh Shabani, Mohammad Ali Mirshekar, Alireza Sarkaki

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ellagic Acid : CK(104) : AC(55), Pomegranate : CK(499) : AC(168)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79), Memory Disorders : CK(340) : AC(103), Memory Disorders: Drug-Induced : CK(99) : AC(25)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Evaluating the potential role of pomegranate peel in aluminum-induced oxidative stress and histopathological alterations in brain of female rats.

**Pubmed Data** : Biol Trace Elem Res. 2012 Dec ;150(1-3):328-36. Epub 2012 Sep 5. PMID: [22945624](#)

**Article Published Date** : Nov 30, 2012

**Authors** : Ahmed E Abdel Moneim

**Study Type** : Animal Study

**Additional Links**

**Substances** : Pomegranate : CK(499) : AC(168), Pomegranate Peel : CK(50) : AC(26)

**Diseases** : Aluminum Toxicity : CK(195) : AC(75), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Phytotherapy : CK(1175) : AC(216), Plant Extracts : CK(7288) : AC(2419)

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## Long-term (15 mo) dietary supplementation with pomegranates from Oman attenuates cognitive and behavioral deficits in a transgenic mice model of Alzheimer's disease.

**Pubmed Data** : Nutrition. 2015 Jan ;31(1):223-9. Epub 2014 Jun 25. PMID: [25441596](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Selvaraju Subash, Nady Braidy, Musthafa Mohamed Essa, Al-Buraiki Zayana, Vaishnav Ragini, Samir Al-Adawi, Abdullah Al-Asmi, Gilles J Guillemin

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Pomegranate : CK(499) : AC(168)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Pomegranate inhibits inflammation, as well as amyloidogenesis in IL-1 $\beta$ -stimulated SK-N-SH cells.

**Pubmed Data** : Eur J Nutr. 2015 Jul 10. Epub 2015 Jul 10. PMID: [26155780](#)

**Article Published Date** : Jul 09, 2015

**Authors** : Ravikanth Velagapudi, Gina Baco, Sunjeet Khela, Uchechukwu Okorji, Olumayokun Olajide

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Pomegranate : CK(499) : AC(168)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Cyclooxygenase 2 Inhibitors : CK(448) : AC(267), NF-kappaB Inhibitor : CK(1100) : AC(686)

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## Pomegranate may offer an attractive dietary strategy for the prevention and treatment of AGE-related diseases such as type-2 diabetes and Alzheimer's disease.

**Pubmed Data** : Food Funct. 2014 Nov ;5(11):2996-3004. PMID: [25233108](#)

**Article Published Date** : Oct 31, 2014

**Authors** : Weixi Liu, Hang Ma, Leslie Frost, Tao Yuan, Joel A Dain, Navindra P Seeram

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Ellagic Acid : CK(104) : AC(55) , Pomegranate : CK(499) : AC(168) , Punicalagin : CK(10) : AC(7) , Tannic Acid : CK(25) : AC(21)

**Diseases** : Advanced Glycation End products (AGE) : CK(231) : AC(73) , Alzheimer's Disease : CK(1282) : AC(375) , Diabetes Mellitus: Type 2: Prevention : CK(646) : AC(83)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Protective Effect of Punica granatum L. against Serum/Glucose Deprivation-Induced PC12 Cells Injury.

**Pubmed Data** : Evid Based Complement Alternat Med. 2013 ;2013:716730. Epub 2013 Jul 7. PMID: [23935674](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Fatemeh Forouzanfar, Amir Afkhami Goli, Elham Asadpour, Ahmad Ghorbani, Hamid Reza Sadeghnia

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Pomegranate : CK(499) : AC(168)

**Diseases** : Diabetes: Cognitive Dysfunction : CK(38) : AC(16) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

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## These results suggest that the therapeutic potential of pomegranate in the treatment of AD might be associated with counteracting oxidative stress.

**Pubmed Data** : J Tradit Complement Med. 2014 Oct ;4(4):232-8. PMID: [25379464](#)

**Article Published Date** : Sep 30, 2014

**Authors** : Selvaraju Subash, Musthafa Mohamed Essa, Abdullah Al-Asmi, Samir Al-Adawi, Ragini Vaishnav, Nady Braidy, Thamilarasan Manivasagam, Gilles J Guillemin

**Study Type** : Transgenic Animal Study

### Additional Links

**Substances** : Pomegranate : CK(499) : AC(168)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain: Oxidative Stress : CK(75) : AC(44) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631)

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## Urolithins are possible brain absorbable compounds which contribute to pomegranate's anti- Alzheimer's disease effects.

**Pubmed Data** : ACS Chem Neurosci. 2015 Nov 17. Epub 2015 Nov 17. PMID: [26559394](#)

**Article Published Date** : Nov 16, 2015

**Authors** : Tao Yuan, Hang Ma, Weixi Liu, Daniel B Niesen, Nishan Shah, Rebecca Crews, Kenneth N Rose, Dhiraj A Vatter, Navindra P Seeram

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Pomegranate](#) : CK(499) : AC(168)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Pomegranate Peel (AC 1) (CK 2)

**Evaluating the potential role of pomegranate peel in aluminum-induced oxidative stress and histopathological alterations in brain of female rats.**

**Pubmed Data** : Biol Trace Elem Res. 2012 Dec ;150(1-3):328-36. Epub 2012 Sep 5. PMID: [22945624](#)

**Article Published Date** : Nov 30, 2012

**Authors** : Ahmed E Abdel Moneim

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Pomegranate](#) : CK(499) : AC(168), [Pomegranate Peel](#) : CK(50) : AC(26)

**Diseases** : [Aluminum Toxicity](#) : CK(195) : AC(75), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Phytotherapy](#) : CK(1175) : AC(216), [Plant Extracts](#) : CK(7288) : AC(2419)

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## Poria cocos (AC 1) (CK 1)

**Coconut water extract protects neuronal cells from beta amyloid-induced cell death through antioxidant and antiapoptotic functions.**

**Pubmed Data** : Pharmazie. 2009 Nov;64(11):760-4. PMID: [20099523](#)

**Article Published Date** : Nov 01, 2009

**Authors** : Yong-Hoon Park, Il Hong Son, Bokyung Kim, Yeoung-Su Lyu, Hyung-In Moon, Hyung-Won Kang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Poria cocos](#) : CK(4) : AC(3)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201) , [Antioxidants](#) : CK(7191) : AC(2630) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Prebiotics (AC 1) (CK 2)

**"Galactooligosaccharide improves the animal survival and alleviates motor neuron death in SOD1G93A mouse model of amyotrophic lateral sclerosis."**

**Pubmed Data** : Neuroscience. 2013 Aug 29 ;246:281-90. Epub 2013 May 11. PMID: [23673277](#)

**Article Published Date** : Aug 28, 2013

**Authors** : L Song, Y Gao, X Zhang, W Le

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Galactooligosaccharides](#) : CK(2) : AC(1) , [Prebiotics](#) : CK(159) : AC(30)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Apoptotic](#) : CK(2942) : AC(2063) , [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

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## Probiotics (AC 2) (CK 3)

**A high fiber diet in the gut might alter gene expression in the brain to prevent neurodegeneration and promote**

## regeneration.

**Pubmed Data** : Neurosci Lett. 2016 Feb 8. Epub 2016 Feb 8. PMID: [26868600](#)

**Article Published Date** : Feb 07, 2016

**Authors** : Megan W Bourassa, Ishraq Alim, Scott J Bultman, Rajiv R Ratan

**Study Type** : Review

**Additional Links**

**Substances** : Butyrate : CK(3) : AC(3), Fiber : CK(808) : AC(103), Probiotics : CK(2852) : AC(361)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Neuroprotective Agents : CK(2237) : AC(1053), Neuroprotective Agents : CK(2237) : AC(1053)

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## Growing up in a bubble: using germ-free animals to assess the influence of the gut microbiota on the brain and behaviour.

**Pubmed Data** : Int J Neuropsychopharmacol. 2016 Feb 23. Epub 2016 Feb 23. PMID: [26912607](#)

**Article Published Date** : Feb 22, 2016

**Authors** : Pauline Luczynski, Karen-Anne McVey Neufeld, Clara Seira Oriach, Gerard Clarke, Timothy G Dinan, John F Cryan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Probiotics : CK(2852) : AC(361)

**Diseases** : Neurodegenerative Diseases : CK(3376) : AC(850)

**Additional Keywords** : Gut-brain Axis : CK(52) : AC(18), Gut-brain Axis : CK(52) : AC(18)

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## Progesterone (AC 4) (CK 15)

### Progesterone has neuroprotective properties in a mouse model of spinal cord motor neuron degeneration disease.

**Pubmed Data** : Neurobiol Dis. 2002 Dec;11(3):457-68. PMID: [12586554](#)

**Article Published Date** : Dec 01, 2002

**Authors** : María Claudia Gonzalez Deniselle, Juan José López-Costa, Jorge Pecci Saavedra, Luciana Pietranera, Susana L Gonzalez, Laura Garay, Rachida Guennoun, Michael Schumacher, Alejandro F De Nicola

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Progesterone](#) : CK(70) : AC(26)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Progesterone has neuroprotective properties in traumatic central nervous system and motor neuron degeneration.

**Pubmed Data** : Front Neuroendocrinol. 2009 Jul;30(2):173-87. Epub 2009 Mar 24. PMID: [19318112](#)

**Article Published Date** : Jul 01, 2009

**Authors** : Alejandro F De Nicola, Florencia Labombarda, Maria Claudia Gonzalez Deniselle, Susana L Gonzalez, Laura Garay, Maria Meyer, Gisella Gargiulo, Rachida Guennoun, Michael Schumacher

**Study Type** : Review

**Additional Links**

**Substances** : [Progesterone](#) : CK(70) : AC(26)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Motor Neuron Disease](#) : CK(464) : AC(102), [Motor Neuron Disease: Amyotrophic Lateral Sclerosis](#) : CK(452) : AC(102) , [Spinal Cord Injuries](#) : CK(137) : AC(45)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Progesterone levels correlate positively with survival and prognosis in ALS patients.

**Pubmed Data** : Acta Neurol Scand. 2011 Jan;123(1):60-7. PMID: [20545634](#)

**Article Published Date** : Jan 01, 2011

**Authors** : G Gargiulo Monachelli, M Meyer, G E Rodríguez, L I Garay, R E P Sica, A F De Nicola, M C González Deniselle

**Study Type** : Human Study

**Additional Links**

**Substances** : [Progesterone](#) : CK(70) : AC(26)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Steroid hormones may have neuroprotective properties in ALS.

**Pubmed Data** : Cell Mol Neurobiol. 2001 Jun;21(3):237-54. PMID: [11569536](#)

**Article Published Date** : Jun 01, 2001

**Authors** : M C González Deniselle, S L González, A F De Nicola

**Study Type** : Animal Study

**Additional Links**

**Substances** : Estradiol (E2) : CK(22) : AC(15) , Progesterone : CK(70) : AC(26) , Testosterone : CK(164) : AC(29)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Motor Neuron Disease : CK(464) : AC(102)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Prunella vulgaris. (AC 1) (CK 2)

**Prunella vulgaris may enhance cognitive function via the activation of various intracellular signaling molecules and the up-regulation of adult hippocampal neurogenesis.**

**Pubmed Data** : Phytother Res. 2015 Nov ;29(11):1814-21. Epub 2015 Sep 17. PMID: [26376910](#)

**Article Published Date** : Oct 31, 2015

**Authors** : Se Jin Park, Young Je Ahn, Hyung Eun Lee, Eunyoung Hong, Jong Hoon Ryu

**Study Type** : Animal Study

**Additional Links**

**Substances** : Prunella vulgaris. : CK(49) : AC(29)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Schizophrenia : CK(434) : AC(68)

**Pharmacological Actions** : Neurogenesis : CK(59) : AC(30) , Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Psyllium (AC 1) (CK 2)

**Plantain husk (psyllium) improves the bioavailability of levodopa (with carbidopa).**

**Pubmed Data** : J Neurol Sci. 2008 Aug 15;271(1-2):15-20. Epub 2008 May 12. PMID: [18474374](#)

**Article Published Date** : Aug 15, 2008

**Authors** : M Jose Diez, Juan J Garcia, Carlos Prieto, Nelida Fernandez, Ana Sahagun, Matilde Sierra

**Study Type** : Animal Study

**Additional Links**

**Substances** : Psyllium : CK(153) : AC(21)

**Diseases** : Parkinson's Disease : CK(526) : AC(164)

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## Pterostilbene (AC 1) (CK 1)

**Piceatannol and pterostilbene have protective effects against A $\beta$ -induced apoptosis in PC12 cells.**

**Pubmed Data** : Food Funct. 2016 Jan 13. Epub 2016 Jan 13. PMID: [26757883](#)

**Article Published Date** : Jan 12, 2016

**Authors** : Zheng Fu, Jiufang Yang, Yangji Wei, Jingming Li

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Piceatannol : CK(5) : AC(3), Pterostilbene : CK(88) : AC(52)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Neuroprotective Agents : CK(2237) : AC(1053)

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## Punicalagin (AC 1) (CK 1)

**Pomegranate may offer an attractive dietary strategy for the prevention and treatment of AGE-related diseases such as type-2 diabetes and Alzheimer's disease.**

**Pubmed Data** : Food Funct. 2014 Nov ;5(11):2996-3004. PMID: [25233108](#)

**Article Published Date** : Oct 31, 2014

**Authors** : Weixi Liu, Hang Ma, Leslie Frost, Tao Yuan, Joel A Dain, Navindra P Seeram

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ellagic Acid : CK(104) : AC(55), Pomegranate : CK(499) : AC(168), Punicalagin : CK(10) : AC(7), Tannic Acid : CK(25) : AC(21)

**Diseases** : Advanced Glycation End products (AGE) : CK(231) : AC(73), Alzheimer's Disease : CK(1282) : AC(375), Diabetes Mellitus: Type 2: Prevention : CK(646) : AC(83)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Purslane (AC 1) (CK 2)

### Purslane has neuroprotective effects against neurotoxicity in mice.

**Pubmed Data** : Chem Biol Interact. 2007 Dec 15;170(3):145-52. Epub 2007 Jul 26. PMID: [17764668](#)

**Article Published Date** : Dec 15, 2007

**Authors** : Zhang Hongxing, Yu Nancai, Huang Guofu, Shao Jianbo, Wu Yanxia, Huang Hanju, Liu Qian, Ma Wei, Yi Yandong, Huang Hao

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Purslane](#) : CK(51) : AC(18)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Pyruvate (AC 1) (CK 2)

### Pyruvate slows disease progression in a transgenic mouse model of ALS.

**Pubmed Data** : Neurosci Lett. 2007 Feb 21;413(3):265-9. Epub 2006 Dec 13. PMID: [17174029](#)

**Article Published Date** : Feb 21, 2007

**Authors** : Jong-Ha Park, Yoon-Ho Hong, Hyun-Jung Kim, Sung-Min Kim, Min-Jeong Kim, Kyung-Seok Park, Jung-Joon Sung, Kwang-Woo Lee

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Pyruvate](#) : CK(2) : AC(1)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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# Quercetin (AC 5) (CK 7)

## Extracts enriched in polyphenols showed promising neuroprotective effects.

**Pubmed Data** : Curr Top Med Chem. 2016 Feb 4. Epub 2016 Feb 4. PMID: [26845551](#)

**Article Published Date** : Feb 03, 2016

**Authors** : Carmela Spagnuolo, Marianna Napolitano, Idolo Tedesco, Stefania Moccia, Alfonsina Milito, Gian Luigi Russo

**Study Type** : Review

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Elderberry : CK(84) : AC(18), Polyphenols : CK(920) : AC(333), Quercetin : CK(557) : AC(246), Resveratrol : CK(1232) : AC(737)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Oral administration of quercetin significantly increased brain apoE and reduced insoluble A $\beta$ levels in the cortex of 5xFAD amyloid model mice.

**Pubmed Data** : Neuropharmacology. 2016 Apr 22. Epub 2016 Apr 22. PMID: [27114256](#)

**Article Published Date** : Apr 21, 2016

**Authors** : Xilin Zhang, Jin Hu, Li Zhong, Na Wang, Longyu Yang, Chia-Chen Liu, Huifang Li, Xin Wang, Ying Zhou, Yunwu Zhang, Huaxi Xu, Guojun Bu, Jiangxing Zhuang

**Study Type** : Animal Study

### Additional Links

**Substances** : Quercetin : CK(557) : AC(246)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Polyphenol antioxidants have properties to treat neurodegenerative diseases.

**Pubmed Data** : Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type :** Review

**Additional Links**

**Substances :** Allicin : CK(48) : AC(25) , Carnosic Acid : CK(21) : AC(16) , Curcumin : CK(4128) : AC(2171) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Isothiocyanate : CK(15) : AC(4) , Quercetin : CK(557) : AC(246) , Resveratrol : CK(1232) : AC(737) , Rosmarinic acid : CK(21) : AC(11) , Sulforaphane : CK(533) : AC(262)

**Diseases :** Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Quercetin is the major neuroprotective component in coffee against Parkinson's disease and Alzheimer's disease.

**Pubmed Data :** Neurobiol Aging. 2016 Jul 5 ;46:113-123. Epub 2016 Jul 5. PMID: [27479153](#)

**Article Published Date :** Jul 04, 2016

**Authors :** Moonhee Lee, Edith G McGeer, Patrick L McGeer

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** Coffee : CK(787) : AC(102) , Quercetin : CK(557) : AC(246)

**Diseases :** Alzheimer's Disease : CK(1282) : AC(375) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

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## Treatment with quercetin may represent a therapeutic strategy to attenuate the neuronal death against aluminum-induced neurodegeneration.

**Pubmed Data :** Neuroscience. 2016 Mar 2. Epub 2016 Mar 2. PMID: [26944603](#)

**Article Published Date :** Mar 01, 2016

**Authors :** D R Sharma, W Y Wani, A Sunkaria, R J Kandimalla, R K Sharma, D Verma, A Bal, K D Gill

**Study Type :** Animal Study

**Additional Links**

**Substances :** Quercetin : CK(557) : AC(246)

**Diseases :** Aluminum Toxicity : CK(195) : AC(75) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

**Problem Substances :** Aluminum : CK(274) : AC(78)

**Adverse Pharmacological Actions :** Neurotoxic : CK(1239) : AC(224)

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## Radish (AC 1) (CK 2)

**Erucic acid may be a novel therapeutic agent for diseases associated with cognitive deficits, such as Alzheimer's disease.**

**Pubmed Data** : Pharmacol Biochem Behav. 2016 Mar ;142:85-90. Epub 2016 Jan 15. PMID: [26780350](#)

**Article Published Date** : Feb 29, 2016

**Authors** : Eunji Kim, Hae Ju Ko, Se Jin Jeon, Sunhee Lee, Hyung Eun Lee, Ha Neul Kim, Eun-Rhan Woo, Jong Hoon Ryu

**Study Type** : Animal Study

**Additional Links**

**Substances** : Radish : CK(6) : AC(3)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Memory Disorders: Drug-Induced : CK(99) : AC(25)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Raspberry (AC 1) (CK 1)

**This reviews and summarizes the available literature that assesses the health-promoting potential of red raspberries.**

**Pubmed Data** : Adv Nutr. 2016 Jan ;7(1):44-65. Epub 2016 Jan 15. PMID: [26773014](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Britt M Burton-Freeman, Amandeep K Sandhu, Indika Edirisinghe

**Study Type** : Review

**Additional Links**

**Substances** : Raspberry : CK(36) : AC(22)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cardiovascular Diseases : CK(7018) : AC(887) , Metabolic Diseases : CK(406) : AC(72) , Obesity : CK(2163) : AC(456)

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## Red Clover (AC 1) (CK 2)

**Ginkgo biloba and red clover in combination was more effective as protective agents compared to each one of them alone.**

**Pubmed Data** : Food Chem Toxicol. 2016 Aug ;94:112-27. Epub 2016 May 24. PMID: [27234133](#)

**Article Published Date** : Jul 31, 2016

**Authors** : Heba M Abdou, Mokhtar I Yousef, Desouki A El Mekkawy, Ahmed S Al-Shami

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ginkgo biloba : CK(796) : AC(161), Red Clover : CK(40) : AC(11)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053), Prophylactic Agents : CK(129) : AC(31)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

**Problem Substances** : Arsenite : CK(9) : AC(6)

## Red Pepper (AC 1) (CK 1)

**Nutraceuticals derived from such spices as turmeric, red pepper, black pepper, licorice, clove, ginger, garlic, coriander, and cinnamon target inflammatory pathways, thereby preventing neurodegenerative diseases.**

**Pubmed Data** : Mol Neurobiol. 2011 Oct ;44(2):142-59. Epub 2011 Mar 1. PMID: [21360003](#)

**Article Published Date** : Oct 01, 2011

**Authors** : Ramaswamy Kannappan, Subash Chandra Gupta, Ji Hye Kim, Simone Reuter, Bharat Bhushan Aggarwal

**Study Type** : Review

**Additional Links**

**Substances** : Black Pepper : CK(229) : AC(96), Cinnamon : CK(243) : AC(88), Clove : CK(104) : AC(55), Coriander : CK(1) : AC(1), Garlic : CK(712) : AC(225), Ginger : CK(676) : AC(175), Licorice : CK(345) : AC(110), Red Pepper : CK(4) : AC(2)

**Diseases** : Inflammation : CK(2863) : AC(839), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Red Sage (AC 1) (CK 1)

### Red sage increases dopamine release in an in vitro study.

**Pubmed Data** : Phytother Res. 2006 Mar;20(3):191-9. PMID: [16521109](#)

**Article Published Date** : Mar 01, 2006

**Authors** : Cheorl-Ho Kim, Byung-Soo Koo, Kyeong-Ok Kim, June-Ki Kim, Young-Chae Chang, In-Seon Lee

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Red Sage : CK(121) : AC(37)

**Diseases** : Dopamine Deficiency : CK(38) : AC(8) , Parkinson's Disease : CK(526) : AC(164)

**Pharmacological Actions** : Dopaminergic : CK(32) : AC(10)

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## Red Wine Extract (AC 2) (CK 2)

### Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : Clin Nutr. 2009 Dec;28(6):604-17. Epub 2009 Sep 25. PMID: [19782443](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Barkha P Patel, Mazen J Hamadeh

**Study Type** : Commentary

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , Carnitine : CK(434) : AC(66) , Coenzyme Q10 : CK(941) : AC(140) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Folic Acid : CK(643) : AC(93) , Ginkgo biloba : CK(796) : AC(161) , Melatonin : CK(946) : AC(304) , Red Wine Extract : CK(114) : AC(32) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Resveratrol's therapeutic properties in neurodegenerative conditions may be due to its gene protective and regulatory as well as antioxidant properties.

**Pubmed Data** : Neuropharmacology. 2008 Jun;54(7):1112-9. Epub 2008 Mar 16. PMID: [15956815](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Sylvain Doré

**Study Type** : Review

### Additional Links

**Substances** : Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Red Wine Extract : CK(114) : AC(32), Resveratrol : CK(1232) : AC(737), Wine : CK(197) : AC(44)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Red Yeast Rice (AC 1) (CK 2)

### Red Mold Rice (i.e. Red Yeast Rice) is superior to Lovastatin in preventing amyloid beta plaque-induced neurotoxicity.

**Pubmed Data** : Antiviral Res. 2008 Feb;77(2):153-6. Epub 2007 Oct 8. PMID: [17663476](#)

**Article Published Date** : Feb 01, 2008

**Authors** : Chun-Lin Lee, Tzong-Fu Kuo, Jyh-Jye Wang, Tzu-Ming Pan

**Study Type** : Animal Study

### Additional Links

**Substances** : Red Yeast Rice : CK(145) : AC(26)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## Rehmannia (AC 1) (CK 1)

**Catalpol, a compound found within Rehmannia, attenuates the neurotoxicity of beta-amyloid plaque associated with neurodegenerative illnesses.**

**Pubmed Data** : Brain Res. 2008 Jan 10;1188:139-47. Epub 2007 Oct 22. PMID: [18022141](#)

**Article Published Date** : Jan 10, 2008

**Authors** : Bo Jiang, Jing Du, Jian-Hui Liu, Yong-Ming Bao, Li-Jia An

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Rehmannia](#) : CK(121) : AC(32)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

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## Reishi Mushroom (AC 2) (CK 4)

**Reishi (Ganoderma Lucidum) protects dopaminergic cells in an animal model of Parkinson disease.**

**Pubmed Data** : Di Yi Jun Yi Da Xue Xue Bao. 2005 Jun;25(6):667-71. PMID: [15958304](#)

**Article Published Date** : Jun 01, 2005

**Authors** : Wei-wen Zhu, Zhuo-lin Liu, Hao-wen Xu, Wen-zheng Chu, Qin-yong Ye, An-mu Xie, Ling Chen, Jin-ru Li

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Reishi Mushroom](#) : CK(167) : AC(76)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**Reishi (Ganoderma lucidum) Protects Dopaminergic Neuron Degeneration Through Inhibition of Microglial Activation.**

**Pubmed Data** : Evid Based Complement Alternat Med. 2009 Jul 16. Epub 2009 Jul 16. PMID:

[19617199](#)

**Article Published Date** : Jul 16, 2009

**Authors** : [No authors listed]

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Reishi Mushroom](#) : CK(167) : AC(76)

**Diseases** : [Brain: Microglial Activation](#) : CK(82) : AC(53), [Brain Inflammation](#) : CK(246) : AC(140), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Interleukin-1 beta downregulation](#) : CK(452) : AC(199), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1752) : AC(641)

## Resveratrol (AC 34) (CK 40)

### A form of reseedveratrol from Mulberry protects against parkinsonian mimetic 6-hydroxydopamine.

**Pubmed Data** : Free Radic Biol Med. 2008 Oct 1;45(7):1019-26. Epub 2008 Jul 16. PMID: [18675900](#)

**Article Published Date** : Oct 01, 2008

**Authors** : Jianfei Chao, Man-Shan Yu, Yuen-Shan Ho, Mingfu Wang, Raymond Chuen-Chung Chang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Mulberry](#) : CK(40) : AC(15), [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163), [Parkinsonian Disorders](#) : CK(15) : AC(4)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

### Dietary supplementation with resveratrol reduces plaque pathology in a transgenic model of Alzheimer's disease.

**Pubmed Data** : Br J Pharmacol. 2010 Dec 30. Epub 2010 Dec 30. PMID: [19041676](#)

**Article Published Date** : Dec 30, 2010

**Authors** : Saravanan S Karuppagounder, John T Pinto, Hui Xu, Huan-Lian Chen, M Flint Beal, Gary E Gibson

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737), [Vitamin C](#) : CK(1953) : AC(401)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Tumor Suppressor Protein p53](#)

Upregulation : CK(293) : AC(202)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Extracts enriched in polyphenols showed promising neuroprotective effects.

**Pubmed Data** : Curr Top Med Chem. 2016 Feb 4. Epub 2016 Feb 4. PMID: [26845551](#)

**Article Published Date** : Feb 03, 2016

**Authors** : Carmela Spagnuolo, Marianna Napolitano, Idolo Tedesco, Stefania Moccia, Alfonsina Milito, Gian Luigi Russo

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Elderberry : CK(84) : AC(18), Polyphenols : CK(920) : AC(333), Quercetin : CK(557) : AC(246), Resveratrol : CK(1232) : AC(737)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Melatonin may potentiate the anti-Alzheimer properties of resveratrol.

**Pubmed Data** : J Clin Neurol. 2010 Sep;6(3):127-37. Epub 2010 Sep 30. PMID: [20944813](#)

**Article Published Date** : Sep 01, 2010

**Authors** : Kyoung Ja Kwon, Hee-Jin Kim, Chan Young Shin, Seol-Heui Han

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Melatonin : CK(946) : AC(304), Resveratrol : CK(1232) : AC(737)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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## Polyphenol antioxidants have properties to treat neurodegenerative diseases.

**Pubmed Data** : Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type** : Review

**Additional Links**

**Substances** : Allicin : CK(48) : AC(25), Carnosic Acid : CK(21) : AC(16), Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Isothiocyanate : CK(15) : AC(4),

Quercetin : CK(557) : AC(246) , Resveratrol : CK(1232) : AC(737) , Rosmarinic acid : CK(21) : AC(11) , Sulforaphane : CK(533) : AC(262)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Resveratrol may have neuroprotective properties in Alzheimer's disease.

**Pubmed Data** : Ann N Y Acad Sci. 2011 Jan;1215:103-8. PMID: [21261647](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Tristan Richard, Alison D Pawlus, Marie-Laure Iglésias, Eric Pedrot, Pierre Waffo-Teguo, Jean-Michel Mérillon, Jean-Pierre Monti

**Study Type** : Review

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737) , Stilbenes : CK(136) : AC(101)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Resveratrol attenuates 6-hydroxydopamine-induced oxidative damage and dopamine depletion in rat model of Parkinson's disease.

**Pubmed Data** : Brain Res. 2010 Apr 30;1328:139-51. Epub 2010 Feb 16. PMID: [20167206](#)

**Article Published Date** : Apr 30, 2010

**Authors** : Mohd Moshahid Khan, Ajmal Ahmad, Tauheed Ishrat, M Badruzzaman Khan, Md Nasrul Hoda, Gulrana Khuwaja, Syed Shadab Raza, Andleeb Khan, Hayate Javed, Kumar Vaibhav, Fakhrul Islam

**Study Type** : Animal Study

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737) , Stilbenes : CK(136) : AC(101)

**Diseases** : Dopamine Deficiency : CK(38) : AC(8) , Lipid Peroxidation : CK(692) : AC(252) , Oxidative Stress : CK(3800) : AC(1357) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Dopaminergic : CK(32) : AC(10)

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## Resveratrol can improve the cognitive ability of Alzheimer's disease mice

**Pubmed Data** : Zhong Nan Da Xue Xue Bao Yi Xue Ban. 2006 Aug;31(4):566-9. PMID: [16951520](#)

**Article Published Date** : Aug 01, 2006

**Authors** : Li Luo, Yi-ming Huang

**Study Type** : Animal Study

### Additional Links

**Substances** : [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## Resveratrol has a protective effect in a cell model of amyotrophic lateral sclerosis.

**Pubmed Data** : Neurosci Lett. 2011 Oct 10 ;503(3):250-5. Epub 2011 Aug 27. PMID: [21896316](#)

**Article Published Date** : Oct 09, 2011

**Authors** : Jing Wang, Yun Zhang, Lu Tang, Nan Zhang, Dongsheng Fan

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Resveratrol](#) : CK(1232) : AC(737), [Stilbenes](#) : CK(136) : AC(101)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062), [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

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## Resveratrol has neuroprotective effects.

**Pubmed Data** : Neurochem Res. 2011 Jan 9. Epub 2011 Jan 9. PMID: [21221775](#)

**Article Published Date** : Jan 09, 2011

**Authors** : Mostafa Rahvar, Mohsen Nikseresht, Sayed Mohammad Shafiee, Fakhraddin Naghibalhossaini, Mozghan Rasti, Mohammad Reza Panjehshahin, Ali Akbar Owji

**Study Type** : Animal Study

### Additional Links

**Substances** : [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Resveratrol inhibits NF-kappa B/DNA binding activity and apoptotic cell death in an in vitro model of Alzheimer's disease.

**Pubmed Data** : Neuroreport. 1998 Feb 16;9(3):527-32. PMID: [9512401](#)

**Article Published Date** : Feb 16, 1998

**Authors** : B Draczynska-Lusiak, Y M Chen, A Y Sun

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Resveratrol](#) : CK(1232) : AC(737), [Stilbenes](#) : CK(136) : AC(101)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Apoptotic](#) : CK(2941) : AC(2062),

## Resveratrol may have a therapeutic role in Alzheimer's disease - Article 2.

**Pubmed Data** : Int J Mol Med. 2006 Jun;17(6):1069-75. PMID: [16685418](#)

**Article Published Date** : Jun 01, 2006

**Authors** : Young Ae Kim, Sun-Young Lim, Sook-Hee Rhee, Kun Young Park, Cheorl-Ho Kim, Byung Tae Choi, Su Jae Lee, Yeong-Min Park, Yung Hyun Choi

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631) , [Cyclooxygenase 2 Inhibitors](#) : CK(448) : AC(267) , [Neuroprotective Agents](#) : CK(2235) : AC(1052) , [NF-kappaB Inhibitor](#) : CK(1100) : AC(686)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## Resveratrol may have a therapeutic role in Alzheimer's disease.

**Pubmed Data** : J Biol Chem. 2010 Mar 19;285(12):9100-13. Epub 2010 Jan 14. PMID: [20080969](#)

**Article Published Date** : Mar 19, 2010

**Authors** : Valérie Vingtdeux, Luca Giliberto, Haitian Zhao, Pallavi Chandakkar, Qingli Wu, James E Simon, Elsa M Janle, Jessica Lobo, Mario G Ferruzzi, Peter Davies, Philippe Marambaud

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Pharmacological Actions** : [Enzyme Inhibitors](#) : CK(463) : AC(250)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## Resveratrol may have neuroprotective effects in different neurodegenerative disorders.

**Pubmed Data** : Biofactors. 2010 Sep;36(5):370-6. PMID: [20848560](#)

**Article Published Date** : Sep 01, 2010

**Authors** : Diego Albani, Letizia Polito, Alessandra Signorini, Gianluigi Forloni

**Study Type** : Review

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)  
**Additional Keywords :** [Stilbenes : CK\(402\) : AC\(242\)](#)

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## Resveratrol may have therapeutic value in selectively remodeling amyloid Abeta proteins associated with neurodegenerative ailments such as Alzheimer's disease.

**Pubmed Data :** J Biol Chem. 2010 Jul 30;285(31):24228-37. Epub 2010 May 28. PMID: [20511235](#)

**Article Published Date :** Jul 30, 2010

**Authors :** Ali Reza A Ladiwala, Jason C Lin, Shyam Sundhar Bale, Anna Marie Marcelino-Cruz, Moumita Bhattacharya, Jonathan S Dordick, Peter M Tessier

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Resveratrol : CK\(1232\) : AC\(737\)](#)

**Diseases :** [Alzheimer's Disease : CK\(1282\) : AC\(375\)](#)

**Pharmacological Actions :** [Antioxidants : CK\(7192\) : AC\(2631\)](#)

**Additional Keywords :** [Stilbenes : CK\(402\) : AC\(242\)](#)

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## Resveratrol may protect against glutamate associated neurotoxicity.

**Pubmed Data :** J Neurochem. 2010 Mar;112(6):1477-87. Epub 2009 Dec 28. PMID: [20050970](#)

**Article Published Date :** Mar 01, 2010

**Authors :** Eun Ok Lee, Hee Ju Park, Jihee Lee Kang, Hye-Sun Kim, Young Hae Chong

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Resveratrol : CK\(1232\) : AC\(737\)](#), [Stilbenes : CK\(136\) : AC\(101\)](#)

**Diseases :** [Alzheimer's Disease : CK\(1282\) : AC\(375\)](#), [Excitotoxicity : CK\(58\) : AC\(35\)](#)

**Pharmacological Actions :** [Enzyme Inhibitors : CK\(463\) : AC\(250\)](#), [Interleukin-1 beta downregulation : CK\(452\) : AC\(199\)](#), [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## Resveratrol may serve as a potential therapeutic agent in the prevention of cadmium induced neurodegenerative diseases.

**Pubmed Data :** J Neurochem. 2015 Jul 4. Epub 2015 Jul 4. PMID: [26146868](#)

**Article Published Date :** Jul 03, 2015

**Authors :** Chunxiao Liu, Ruijie Zhang, Chenxia Sun, Hai Zhang, Chong Xu, Wen Liu, Wei Gao, Shile Huang, Long Chen

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Resveratrol : CK\(1232\) : AC\(737\)](#)

**Diseases** : Cadmium Poisoning : CK(129) : AC(61), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Problem Substances** : Cadmium : CK(41) : AC(4)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Resveratrol promotes clearance of Alzheimer's disease amyloid-beta peptides.

**Pubmed Data** : J Biol Chem. 2005 Nov 11;280(45):37377-82. Epub 2005 Sep 14. PMID: [16162502](#)

**Article Published Date** : Nov 11, 2005

**Authors** : Philippe Marambaud, Haitian Zhao, Peter Davies

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Pharmacological Actions** : Proteasome Inhibitors : CK(51) : AC(33)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Resveratrol protects dopamine neurons against lipopolysaccharide-induced neurotoxicity.

**Pubmed Data** : Mol Pharmacol. 2010 Sep 1;78(3):466-77. Epub 2010 Jun 16. PMID: [20554604](#)

**Article Published Date** : Sep 01, 2010

**Authors** : Feng Zhang, Jing-Shan Shi, Hui Zhou, Belinda Wilson, Jau-Shyong Hong, Hui-Ming Gao

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Resveratrol : CK(1232) : AC(737)

**Diseases** : Brain: Microglial Activation : CK(82) : AC(53), Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216), Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Resveratrol upregulated heat shock proteins and extended the survival of in a mouse model of ALS.

**Pubmed Data** : Brain Res. 2012 Nov 5 ;1483:112-7. Epub 2012 Sep 19. PMID: [23000195](#)

**Article Published Date** : Nov 04, 2012

**Authors** : Soyoung Han, Jong-Ryoul Choi, Ki Soon Shin, Shin Jung Kang

**Study Type** : Animal Study

### Additional Links

**Substances** : Resveratrol : CK(1232) : AC(737), Stilbenes : CK(136) : AC(101)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Heat Shock Protein Inducer : CK(83) : AC(30), Superoxide Dismutase Up-regulation : CK(504) : AC(169)

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## Resveratrol's therapeutic properties in neurodegenerative conditions may be due to its gene protective and regulatory as well as antioxidant properties.

**Pubmed Data** : Neuropharmacology. 2008 Jun;54(7):1112-9. Epub 2008 Mar 16. PMID: [15956815](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Sylvain Doré

**Study Type** : Review

### Additional Links

**Substances** : Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Red Wine Extract : CK(114) : AC(32), Resveratrol : CK(1232) : AC(737), Wine : CK(197) : AC(44)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Resveratrol: a natural compound with pharmacological potential in neurodegenerative diseases.

**Pubmed Data** : CNS Neurosci Ther. 2008 ;14(3):234-47. Epub 2008 Jul 29. PMID: [18684235](#)

**Article Published Date** : Dec 31, 2007

**Authors** : Héctor I Rocha-González, Mónica Ambríz-Tututi, Vinicio Granados-Soto

**Study Type** : Review

### Additional Links

**Substances** : Resveratrol : CK(1232) : AC(737), Stilbenes : CK(136) : AC(101)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140), Huntington Disease : CK(84) : AC(32), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Review: Resveratrol's therapeutic role in Alzheimer's disease.

**Pubmed Data** : Brain Res Rev. 2006 Sep;52(2):316-26. PMID: [16766037](#)

**Article Published Date** : Sep 01, 2006

**Authors** : Thimmappa S Anekonda

**Study Type** : Review

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Aging](#) : CK(1581) : AC(428), [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## Review: Therapeutic potential of resveratrol in Alzheimer's disease.

**Pubmed Data** : BMC Neurosci. 2008;9 Suppl 2:S6. Epub 2008 Dec 3. PMID: [19090994](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Valérie Vingtdeux, Ute Dreses-Werringloer, Haitian Zhao, Peter Davies, Philippe Marambaud

**Study Type** : Review

**Additional Links**

**Substances** : [Flavonoids](#) : CK(1194) : AC(376), [Polyphenols](#) : CK(920) : AC(333), [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Dementia](#) : CK(571) : AC(79)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## Review: resveratrol as a therapeutic agent for neurodegenerative diseases.

**Pubmed Data** : Mol Neurobiol. 2010 Jun;41(2-3):375-83. Epub 2010 Mar 21. PMID: [20306310](#)

**Article Published Date** : Jun 01, 2010

**Authors** : Albert Y Sun, Qun Wang, Agnes Simonyi, Grace Y Sun

**Study Type** : Review

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737), [Stilbenes](#) : CK(136) : AC(101)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Inflammation](#) : CK(2863) : AC(839), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3799) : AC(1356), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Apoptotic](#) : CK(2941) : AC(2062), [SIRT1 Activator](#) : CK(39) : AC(23)

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## Review: resveratrol has neuroprotective properties.

**Pubmed Data** : Brain Res Bull. 2010 Mar 16;81(4-5):359-61. Epub 2009 Dec 21. PMID: [20026255](#)

**Article Published Date** : Mar 16, 2010

**Authors** : Bor Luen Tang

**Study Type :** Review

**Additional Links**

**Substances :** [Resveratrol](#) : CK(1232) : AC(737), [Stilbenes](#) : CK(136) : AC(101)

**Diseases :** [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**This article summarizes the most recent findings on mechanisms of action involved in the protective effects of this multi target polyphenol.**

**Pubmed Data :** [Biochim Biophys Acta](#). 2015 Jun ;1852(6):1195-1201. Epub 2014 Oct 2. PMID: [25281824](#)

**Article Published Date :** May 31, 2015

**Authors :** Stéphane Bastianetto, Caroline Ménard, Rémi Quirion

**Study Type :** Review

**Additional Links**

**Substances :** [Resveratrol](#) : CK(1232) : AC(737)

**Diseases :** [Alzheimer's Disease](#) : CK(1282) : AC(375), [Macular Degeneration](#) : CK(197) : AC(33), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Neurologic Disorders](#) : CK(65) : AC(29), [Stroke: Attenuation/Recovery](#) : CK(345) : AC(74)

**Pharmacological Actions :** [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573), [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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**This review will focus on the neuroprotective effect of Res against Glu-induced excitotoxicity in neurodegenerative diseases by blocking different Glu receptors and Ca<sup>2+</sup> ion channels.**

**Pubmed Data :** [Adv Clin Exp Med](#). 2015 Jan-Feb;24(1):161-5. PMID: [25923101](#)

**Article Published Date :** Dec 31, 2014

**Authors :** Li-Nan Zhang, Liang Hao, Hai-Yan Wang, Hong-Ning Su, Yong-Jun Sun, Xiao-Yue Yang, Bin Che, Jiao Xue, Zi Bin Gao

**Study Type :** Review

**Additional Links**

**Substances :** [Resveratrol](#) : CK(1232) : AC(737)

**Diseases :** [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**This review will provide an overview of the antioxidant, anti-inflammatory, anti-amyloidogenic, neuroprotective, and cognition-enhancing effects of a variety of**

## nutraceuticals.

**Pubmed Data** : Neurochem Int. 2015 Oct 31. Epub 2015 Oct 31. PMID: [26529297](#)

**Article Published Date** : Oct 30, 2015

**Authors** : Madhuri Venigalla, Erika Gyengesi, Matthew J Sharman, Gerald Münch

**Study Type** : Review

### Additional Links

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , Apigenin : CK(158) : AC(101) , Curcumin : CK(4128) : AC(2171) , DHA (Docosaehaenoic Acid) : CK(783) : AC(129) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Resveratrol : CK(1232) : AC(737)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## This reviews the biological activities and multiple effects of resveratrol.

**Pubmed Data** : Medicina (Kaunas). 2016 ;52(3):148-55. Epub 2016 Apr 7. PMID: [27496184](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Lolita Kuršvietienė, Inga Stanevičienė, Aušra Mongirdienė, Jurga Bernatoniene

**Study Type** : Review

### Additional Links

**Substances** : Resveratrol : CK(1233) : AC(738)

**Diseases** : Cancers: All : CK(14319) : AC(4545) , Cardiovascular Diseases : CK(7018) : AC(887) , Inflammation : CK(2867) : AC(841) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Apoptotic : CK(363) : AC(203) , Anti-Inflammatory Agents : CK(4512) : AC(1582) , Anti-Platelet : CK(124) : AC(37) , Antioxidants : CK(7211) : AC(2639) , Apoptotic : CK(2943) : AC(2064) , Cardioprotective : CK(1576) : AC(401) , Chemopreventive : CK(2719) : AC(770)

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## This reviews the neuroprotective roles of these herbs and summarizes their anti-inflammatory, antioxidant, and anti-apoptotic effects in PD.

**Pubmed Data** : Am J Transl Res. 2015 ;7(7):1189-202. Epub 2015 Jul 15. PMID: [26328004](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Wenyu Fu, Wenxin Zhuang, Shuanhu Zhou, Xin Wang

**Study Type** : Review

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171) , Ginsenosides : CK(69) : AC(28) , Resveratrol : CK(1232) : AC(737)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201) , Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Trans-resveratrol protect against neuronal damage.

**Pubmed Data** : Toxicol In Vitro. 2010 Sep;24(6):1592-8. Epub 2010 Jun 22. PMID: [20600804](#)

**Article Published Date** : Sep 01, 2010

**Authors** : M A Siddiqui, M P Kashyap, V Kumar, A A Al-Khedhairi, J Musarrat, A B Pant

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737)

**Diseases** : Brain Damage : CK(93) : AC(44), Lipid Peroxidation : CK(692) : AC(252),  
Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Apoptotic : CK(2941) : AC(2062),  
Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Various stilbenes inhibit Alzheimer's beta-amyloid fibrils in vitro.

**Pubmed Data** : Bioorg Med Chem. 2007 Jan 15;15(2):1160-7. Epub 2006 Oct 1. PMID: [17049256](#)

**Article Published Date** : Jan 15, 2007

**Authors** : Céline Rivière, Tristan Richard, Lysiane Quentin, Stéphanie Krisa, Jean-Michel Mérillon,  
Jean-Pierre Monti

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737), Stilbenes : CK(136) : AC(101)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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## Whole-grape products are safer choices for better health and disease prevention. But for advanced disease conditions, individual grape ingredients or combinations appear to be better.

**Pubmed Data** : Ann N Y Acad Sci. 2015 Jun 22. Epub 2015 Jun 22. PMID: [26099945](#)

**Article Published Date** : Jun 21, 2015

**Authors** : Chandra K Singh, Xiaoqi Liu, Nihal Ahmad

**Study Type** : Commentary

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114), Catechin : CK(512) : AC(169), Flavonoids : CK(1194) :  
AC(376), Grapes : CK(26) : AC(7), Polyphenols : CK(920) : AC(333), Resveratrol : CK(1232) : AC(737)

**Diseases** : Cancers: All : CK(14297) : AC(4542), Neurodegenerative Diseases : CK(3370) : AC(846)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Natural Substance Synergy  
: CK(534) : AC(244)

## Rhubarb (AC 1) (CK 2)

**Rheum ribes extract has potential therapeutic effects for neurological diseases, such as Alzheimer's.**

**Pubmed Data** : Iran J Pharm Res. 2015 ;14(4):1197-206. PMID: [26664387](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Maryam Zahedi, Mohammad Reza Hojjati, Hossein Fathpour, Zahra Rabiei, Zahra Alibabaei, Arezoo Basim

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Rhubarb](#) : CK(44) : AC(25)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Memory Disorders](#) : CK(340) : AC(103)

## Rice Bran (AC 3) (CK 5)

**Long-term treatment with a nutraceutical containing rice bran extract could be useful for slowing down brain aging.**

**Pubmed Data** : Neuromolecular Med. 2016 Jun 27. Epub 2016 Jun 27. PMID: [27350374](#)

**Article Published Date** : Jun 26, 2016

**Authors** : Stephanie Hagl, Heike Asseburg, Martina Heinrich, Nadine Sus, Eva-Maria Blumrich, Ralf Dringen, Jan Frank, Gunter P Eckert

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Rice Bran](#) : CK(127) : AC(37) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Aging: Brain](#) : CK(246) : AC(84) , [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Mitochondrial Dysfunction](#) : CK(224) : AC(90) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419) , [Risk Reduction](#) : CK(6136) : AC(658)

## Rice bran extract is a promising candidate nutraceutical for the prevention of age-related neurodegenerative diseases.

**Pubmed Data** : Nutr Neurosci. 2015 Aug 4. Epub 2015 Aug 4. PMID: [26241203](#)

**Article Published Date** : Aug 03, 2015

**Authors** : Stephanie Hagl, Dirk Berressem, Rehka Grewal, Nadine Grebenstein, Jan Frank, Gunter P Eckert

**Study Type** : Animal Study

### Additional Links

**Substances** : Rice Bran : CK(127) : AC(37) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Mitochondrial Dysfunction : CK(224) : AC(90), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Rice bran extract is able to affect microglial activation by interfering in important inflammatory pathway.

**Pubmed Data** : J Neuroinflammation. 2016 ;13(1):148. Epub 2016 Jun 14. PMID: [27301644](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Harsharan S Bhatia, Julian Baron, Stephanie Hagl, Gunter P Eckert, Bernd L Fiebich

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Rice Bran : CK(127) : AC(37)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Interleukin-10 upregulation : CK(104) : AC(23) , Interleukin-1 beta downregulation : CK(454) : AC(200), Prostaglandin PGE2 downregulation : CK(96) : AC(46) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Rice: Black (AC 1) (CK 1)

A purple rice extract and its major constituent, cyanidin, were successful in protecting from the cytotoxic effect of A $\beta$  25-35 through attenuation ROS and RNS production.

**Pubmed Data** : Neurotoxicology. 2014 Dec ;45:149-58. Epub 2014 Oct 28. PMID: [25451968](#)

**Article Published Date** : Nov 30, 2014

**Authors** : Sarinthorn Thummayot, Chainarong Tocharus, Decha Pinkaew, Kittikun Viwatpinyo, Korawan Sringarm, Jiraporn Tocharus

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Cyanidin](#) : CK(1) : AC(1), [Rice: Black](#) : CK(24) : AC(15)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400), [Plant Extracts](#) : CK(7288) : AC(2419)

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## Rooibos (AC 1) (CK 2)

**Rooibos tea suppresses age-related accumulation of lipid peroxides in the rat brain.**

**Pubmed Data** : Neurosci Lett. 1995 Aug 18;196(1-2):85-8. PMID: [7501264](#)

**Article Published Date** : Aug 18, 1995

**Authors** : O Inanami, T Asanuma, N Inukai, T Jin, S Shimokawa, N Kasai, M Nakano, F Sato, M Kuwabara

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Rooibos](#) : CK(20) : AC(13)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Rose (AC 2) (CK 4)

**R. damascena can reverse behavioural deficits caused by amyloid-A- $\beta$  in rats.**

**Pubmed Data** : Adv Biomed Res. 2015 ;4:131. Epub 2015 Jul 27. PMID: [26322279](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Ebrahim Esfandiary, Mohammad Karimipour, Mohammad Mardani, Mustafa Ghanadian, Hojjat Allah Alaei, Daryoush Mohammadnejad, Abolghasem Esmaeili

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Flavonoids](#) : CK(1194) : AC(376) , [Rose](#) : CK(167) : AC(46)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## R. damascena is a promising treatment for mild memory impairments and AD.

**Pubmed Data** : J Neurosci Res. 2014 Apr ;92(4):517-30. Epub 2014 Jan 2. PMID: [24395280](#)

**Article Published Date** : Mar 31, 2014

**Authors** : Ebrahim Esfandiary, Mohammad Karimipour, Mohammad Mardani, Hojjatallah Alaei, Mustafa Ghannadian, Mohammad Kazemi, Daryoush Mohammadnejad, Nasrin Hosseini, Abolghasem Esmaeili

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Rose](#) : CK(167) : AC(46)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Dementia](#) : CK(571) : AC(79) , [Memory Disorders](#) : CK(340) : AC(103)

**Pharmacological Actions** : [Neurogenesis](#) : CK(59) : AC(30) , [Neuroplasticity enhancement](#) : CK(44) : AC(12)

**Additional Keywords** : [Phytotherapy](#) : CK(1175) : AC(216) , [Plant Extracts](#) : CK(7290) : AC(2420)

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## Rosemaric Acid (AC 1) (CK 2)

### Rosmarinic acid has therapeutic value in motor dysfunction and life span in a mouse model of familial amyotrophic lateral sclerosis.

**Pubmed Data** : J Neurosci Res. 2010 Mar ;88(4):896-904. PMID: [19798750](#)

**Article Published Date** : Feb 28, 2010

**Authors** : Yosuke Shimojo, Kunio Kosaka, Yoshihiro Noda, Takahiko Shimizu, Takuji Shirasawa

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Rosemaric Acid](#) : CK(1) : AC(1) , [Rosemary](#) : CK(216) : AC(77)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631) , [Superoxide Dismutase Up-](#)

regulation : CK(504) : AC(169)

**Additional Keywords** : Phytotherapy : CK(1175) : AC(216)

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## Rosemary (AC 5) (CK 7)

**Carnosic acid, a compound within Rosemary, stimulates nerve growth factor in human glioblastoma cells.**

**Pubmed Data** : Mol Cancer Ther. 2004 Oct;3(10):1239-48. PMID: [14600414](#)

**Article Published Date** : Oct 01, 2004

**Authors** : Kunio Kosaka, Toshio Yokoi

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Carnosic Acid : CK(21) : AC(16), Rosemary : CK(216) : AC(77)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(526) : AC(164)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59)

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**Carnosic acid, found within rosemary, has a protective effect against oxidative stress in neuronal cells.**

**Pubmed Data** : Planta Med. 2009 Nov 25. Epub 2009 Nov 25. PMID: [19941258](#)

**Article Published Date** : Nov 25, 2009

**Authors** : Yosei Tamaki, Takahito Tabuchi, Toshiyuki Takahashi, Kunio Kosaka, Takumi Satoh

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Rosemary : CK(216) : AC(77)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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**Curcumin and rosemary have anti-Alzheimer's activity.**

**Pubmed Data** : J Neurosci Res. 2004 Mar 15;75(6):742-50. PMID: [14994335](#)

**Article Published Date** : Mar 15, 2004

**Authors** : Kenjiro Ono, Kazuhiro Hasegawa, Hironobu Naiki, Masahito Yamada

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Rosemary : CK(216) : AC(77)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Pharmacological Actions** : Platelet Aggregation Inhibitors : CK(186) : AC(40)

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## Rosemary protects dopaminergic neuronal cells

**Pubmed Data** : Neuroreport. 2008 Aug 27;19(13):1301-4. PMID: [18695511](#)

**Article Published Date** : Aug 27, 2008

**Authors** : Jeong Ae Park, Seung Kim, Sook-Young Lee, Chun-Sung Kim, Do Kyung Kim, Sung-Jun Kim, Hong Sung Chun

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Carnosic Acid : CK(21) : AC(16), Rosemary : CK(216) : AC(77)

**Diseases** : Parkinson's Disease : CK(526) : AC(164)

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## Rosmarinic acid has therapeutic value in motor dysfunction and life span in a mouse model of familial amyotrophic lateral sclerosis.

**Pubmed Data** : J Neurosci Res. 2010 Mar ;88(4):896-904. PMID: [19798750](#)

**Article Published Date** : Feb 28, 2010

**Authors** : Yosuke Shimojo, Kunio Kosaka, Yoshihiro Noda, Takahiko Shimizu, Takuji Shirasawa

**Study Type** : Animal Study

**Additional Links**

**Substances** : Rosemaric Acid : CK(1) : AC(1), Rosemary : CK(216) : AC(77)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Superoxide Dismutase Up-regulation : CK(504) : AC(169)

**Additional Keywords** : Phytotherapy : CK(1175) : AC(216)

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## Rosemary: Essential Oil (AC 1) (CK 10)

### Aromatherapy has a positive effect on dementia in patients with Alzheimer's disease.

**Pubmed Data** : Psychogeriatrics. 2009 Dec ;9(4):173-9. PMID: [20377818](#)

**Article Published Date** : Nov 30, 2009

**Authors** : Daiki Jimbo, Yuki Kimura, Miyako Taniguchi, Masashi Inoue, Katsuya Urakami

**Study Type :** Human Study

**Additional Links**

**Substances :** [Lavender: Essential Oil : CK\(176\) : AC\(20\)](#) , [Rosemary: Essential Oil : CK\(10\) : AC\(1\)](#)

**Diseases :** [Dementia : CK\(571\) : AC\(79\)](#)

**Therapeutic Actions :** [Aromatherapy : CK\(652\) : AC\(65\)](#)

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## Rosmarinic acid (AC 2) (CK 2)

**Discovery of natural compounds as nonpeptidyl inhibitors is a significant transition towards feasible drug development for neurodegenerative disorders.**

**Pubmed Data :** Biomed Res Int. 2015 ;2015:379817. Epub 2015 May 4. PMID: [26064904](#)

**Article Published Date :** Dec 31, 2014

**Authors :** Saif Khan, Khurshid Ahmad, Eyad M A Alshammari, Mohd Adnan, Mohd Hassan Baig, Mohtashim Lohani, Pallavi Somvanshi, Shafiul Haque

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [Curcumin : CK\(4128\) : AC\(2171\)](#) , [Rosmarinic acid : CK\(21\) : AC\(11\)](#)

**Diseases :** [Alzheimer's Disease : CK\(1283\) : AC\(376\)](#) , [Amyotrophic lateral sclerosis \(ALS\) : CK\(566\) : AC\(140\)](#) , [Huntington Disease : CK\(84\) : AC\(32\)](#) , [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#) , [Parkinson's Disease : CK\(525\) : AC\(163\)](#)

**Pharmacological Actions :** [Nonpeptidyl Inhibitors : CK\(1\) : AC\(1\)](#)

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**Polyphenol antioxidants have properties to treat neurodegenerative diseases.**

**Pubmed Data :** Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date :** Mar 31, 2016

**Authors :** Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type :** Review

**Additional Links**

**Substances :** [Allicin : CK\(48\) : AC\(25\)](#) , [Carnosic Acid : CK\(21\) : AC\(16\)](#) , [Curcumin : CK\(4128\) : AC\(2171\)](#) , [EGCG \(Epigallocatechin gallate\) : CK\(606\) : AC\(312\)](#) , [Isothiocyanate : CK\(15\) : AC\(4\)](#) , [Quercetin : CK\(557\) : AC\(246\)](#) , [Resveratrol : CK\(1232\) : AC\(737\)](#) , [Rosmarinic acid : CK\(21\) : AC\(11\)](#) , [Sulforaphane : CK\(533\) : AC\(262\)](#)

**Diseases :** [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#)

**Pharmacological Actions :** [Antioxidants : CK\(7191\) : AC\(2630\)](#) , [Neuroprotective Agents : CK\(2235\) : AC\(1052\)](#)

## Royal Jelly (AC 3) (CK 4)

### Royal jelly had anti- Alzheimer's disease properties.

**Pubmed Data** : Oncotarget. 2016 Jul 26. Epub 2016 Jul 26. PMID: [27472466](#)

**Article Published Date** : Jul 25, 2016

**Authors** : Xiaoxia Wang, Min Cao, Yuqing Dong

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Royal Jelly](#) : CK(62) : AC(27)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

### Royal jelly has neuritogenic properties. - Article 1

**Pubmed Data** : Evid Based Complement Alternat Med. 2007 Oct 29. PMID: [18955270](#)

**Article Published Date** : Oct 29, 2007

**Authors** : Noriko Hattori, Hiroshi Nomoto, Hidefumi Fukumitsu, Satoshi Mishima, Shoei Furukawa

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Royal Jelly](#) : CK(62) : AC(27)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuritogenic](#) : CK(133) : AC(59)

### Royal jelly has neuritogenic properties. - Article 2

**Pubmed Data** : Biomed Res. 2007 Oct;28(5):261-6. PMID: [18000339](#)

**Article Published Date** : Oct 01, 2007

**Authors** : Noriko Hattori, Hiroshi Nomoto, Hidefumi Fukumitsu, Satoshi Mishima, Shoei Furukawa

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Royal Jelly](#) : CK(62) : AC(27)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuritogenic](#) : CK(133) : AC(59)

**Additional Keywords** : [Nerve Regeneration](#) : CK(26) : AC(9) , [Regenerative Substances](#) : CK(42) : AC(19)

## Rutin (AC 2) (CK 3)

### Rutin could be used as a natural therapy for Alzheimer's disease.

**Pubmed Data** : Curr Med Chem. 2016 Feb 17. Epub 2016 Feb 17. PMID: [26898570](#)

**Article Published Date** : Feb 16, 2016

**Authors** : Solomon Habtemariam

**Study Type** : Review

**Additional Links**

**Substances** : Rutin : CK(126) : AC(48)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Antioxidants : CK(7191) : AC(2630), Chelating Agents : CK(12) : AC(1)

**Additional Keywords** : Blood Brain Barrier : CK(32) : AC(12)

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### Treadmill running and rutin could improve high fat diet induced cognitive impairment.

**Pubmed Data** : J Nutr Health Aging. 2016 ;20(5):503-8. PMID: [27102787](#)

**Article Published Date** : Dec 31, 2015

**Authors** : J Cheng, L Chen, S Han, L Qin, N Chen, Z Wan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Rutin : CK(126) : AC(48)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

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## SAMe (S-adenosylmethionine) (AC 4) (CK 32)

A multi-vitamin/nutrient formula has therapeutic value

## in early-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Demen. 2008 Dec-2009 Jan;23(6):571-85. Epub 2008 Dec 1. PMID: [19047474](#)

**Article Published Date** : Dec 01, 2008

**Authors** : Amy Chan, James Paskavitz, Ruth Remington, Shelly Rasmussen, Thomas B Shea

**Study Type** : Human Study

**Additional Links**

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-6 : CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## A multi-vitamin/nutrient formula has therapeutic value in moderate-stage to later-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Demen. 2009 Feb-Mar;24(1):27-33. Epub 2008 Dec 3. PMID: [19056706](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Ruth Remington, Amy Chan, James Paskavitz, Thomas B Shea

**Study Type** : Human Study

**Additional Links**

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-12 : CK(770) : AC(103), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## SAM plays a neuroprotective role by increasing the expression of endogenous BDNF and could be a potential target for AD therapy.

**Pubmed Data** : Neurosci Bull. 2016 Apr ;32(2):153-61. Epub 2016 Mar 16. PMID: [26983613](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Qian Li, Jing Cui, Chen Fang, Xiaowen Zhang, Liang Li

**Study Type** : Animal Study

**Additional Links**

**Substances** : SAME (S-adenosylmethionine) : CK(113) : AC(20)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Sam-e appears to be well tolerated and effect in the treatment of depression in Parkinson's disease.

**Pubmed Data** : Mov Disord. 2000 Nov;15(6):1225-9. PMID: [11104210](#)

**Article Published Date** : Nov 01, 2000

**Authors** : A Di Rocco, J D Rogers, R Brown, P Werner, T Bottiglieri

**Study Type** : Human Study

**Additional Links**

**Substances** : [SAME \(S-adenosylmethionine\)](#) : CK(113) : AC(20)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Saffron (AC 6) (CK 16)

**A review, the current human clinical evidence supporting saffron supplementation as a treatment for a range of pathologies and the underlying science supporting its use.**

**Pubmed Data** : Crit Rev Food Sci Nutr. 2015 Apr 15:0. Epub 2015 Apr 15. PMID: [25875654](#)

**Article Published Date** : Apr 14, 2015

**Authors** : G K Broadhead, A Chang, J Grigg, P McCluskey

**Study Type** : Review

**Additional Links**

**Substances** : [Saffron](#) : CK(255) : AC(63)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Macular Degeneration](#) : CK(197) : AC(33) , [Myocardial Ischemia](#) : CK(131) : AC(58)

**Pharmacological Actions** : [Cardioprotective](#) : CK(1574) : AC(400) , [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**Corcin has multi structural characteristics which lead to variable neuroprotective properties.**

**Pubmed Data** : Iran J Basic Med Sci. 2015 May ;18(5):485-92. PMID: [26124935](#)

**Article Published Date** : Apr 30, 2015

**Authors** : Ali Mohammadi Karakani, Gholamhossein Riazi, Seyed Mahmood Ghaffari, Shahin Ahmadian, Farzad Mokhtari, Mahshad Jalili Firuzi, Seyedeh Zahra Bathaie

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Saffron](#) : CK(255) : AC(63)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Saffron compares favorably to donepezil in the treatment of mild-to-moderate Alzheimer's disease.

**Pubmed Data** : Psychopharmacology (Berl). 2010 Jan;207(4):637-43. Epub 2009 Oct 20. PMID: [19838862](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Shahin Akhondzadeh, Mehdi Shafiee Sabet, Mohammad Hossein Harirchian, Mansoreh Togha, Hamed Cheraghmakani, Soodeh Razeghi, Seyyed Shamssedin Hejazi, Mohammad Hossein Yousefi, Roozbeh Alimardani, Amirhossein Jamshidi, Shams-Ali Rezazadeh, Aboulghasem Yousefi, Farhad Zare, Atbin Moradi, Ardalan Vossoughi

**Study Type** : Human Study

**Additional Links**

**Substances** : Saffron : CK(255) : AC(63)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Additional Keywords** : Natural Substances Versus Drugs : CK(1694) : AC(300) , Plant Extracts : CK(7290) : AC(2420)

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## Saffron may be exploited as a supplementary therapeutic agent in PD and other oxidative stress mediated neurodegenerative conditions.

**Pubmed Data** : Neurotoxicology. 2015 Dec 17 ;52:230-242. Epub 2015 Dec 17. PMID: [26705857](#)

**Article Published Date** : Dec 16, 2015

**Authors** : Sriranjini Venkat Rao, Muralidhara, Sarat Chandra Yeniseti, Padmanabhan S Rajini

**Study Type** : Insect Study

**Additional Links**

**Substances** : Crocin : CK(58) : AC(34) , Saffron : CK(255) : AC(63)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3800) : AC(1357) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## The bioactive components of Crocus sativus have been found to modulate several synaptic processes via direct/indirect interplay with neurotransmitter receptor functions.

**Pubmed Data** : CNS Neurol Disord Drug Targets. 2015 ;14(7):880-902. PMID: [25714974](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Damanpreet Singh

**Study Type** : Review

**Additional Links**

**Substances** : Saffron : CK(255) : AC(63)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Depressive Disorder : CK(405) : AC(57)  
**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## This review highlights the findings regarding antiinflammatory, antioxidant, and immunomodulatory effects of *C. sativus* and its constituents.

**Pubmed Data** : Phytother Res. 2016 Apr 21. Epub 2016 Apr 21. PMID: [27098287](#)

**Article Published Date** : Apr 20, 2016

**Authors** : Mohammad Hossein Boskabady, Tahereh Farkhondeh

**Study Type** : Review

**Additional Links**

**Substances** : Saffron : CK(255) : AC(63)

**Diseases** : Asthma : CK(1144) : AC(187) , Bronchitis : CK(73) : AC(7) , Common Cold : CK(549) : AC(67) , Coronary Artery Disease : CK(1468) : AC(155) , Fever : CK(90) : AC(17) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Antioxidants : CK(7191) : AC(2630) , Immunomodulatory : CK(1284) : AC(355)

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## Sage (AC 2) (CK 20)

### Sage (*Salvia officinalis*) extract has a therapeutic effect on patients with mild to moderate Alzheimer's disease.

**Pubmed Data** : J Clin Pharm Ther. 2003 Feb;28(1):53-9. PMID: [12605619](#)

**Article Published Date** : Feb 01, 2003

**Authors** : S Akhondzadeh, M Noroozian, M Mohammadi, S Ohadinia, A H Jamshidi, M Khani

**Study Type** : Human Study

**Additional Links**

**Substances** : Sage : CK(126) : AC(30)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Additional Keywords** : Plant Extracts : CK(7290) : AC(2420)

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The spice sage and its active, neuroprotective ingredient rosmarinic acid could validate the traditional use of this spice in the treatment of Alzheimer's disease.

**Pubmed Data** : J Pharmacol Exp Ther. 2006 Jun;317(3):1143-9. Epub 2006 Feb 22. PMID: [16495207](#)

**Article Published Date** : Jun 01, 2006

**Authors** : Teresa Iuvone, Daniele De Filippis, Giuseppe Esposito, Alessandra D'Amico, Angelo A Izzo

**Study Type** : Human Study

**Additional Links**

**Substances** : [Sage](#) : CK(126) : AC(30)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Confirm](#) : CK(10) : AC(1)

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## Schisandra (AC 2) (CK 3)

**Schisandra may be useful in treating and preventing neurodegenerative diseases associated with oxidative stress.**

**Pubmed Data** : J Pharm Pharmacol. 2007 Mar;59(3):455-62. PMID: [17331350](#)

**Article Published Date** : Mar 01, 2007

**Authors** : Chang Hwa Jung, Myung Hee Hong, Ji Hye Kim, Ji Yun Lee, Seong Gyu Ko, Kiho Cho, Ho Moon Seog

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Schisandra](#) : CK(129) : AC(45)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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**Schizandrin, a compound found within the fruit of Schisandra, reverses memory impairment in rats.**

**Pubmed Data** : Phytother Res. 2008 Jan;22(1):49-52. PMID: [17705144](#)

**Article Published Date** : Jan 01, 2008

**Authors** : Nobuaki Egashira, Kouji Kurauchi, Katsunori Iwasaki, Kenichi Mishima, Kensuke Orito, Ryozi Oishi, Michihiro Fujiwara

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Schisandra](#) : CK(129) : AC(45)

**Diseases** : [Dementia](#) : CK(571) : AC(79), [Memory Disorders](#) : CK(340) : AC(103), [Memory Loss](#) :

## Scolopendra subspinipes mutilans (AC 1) (CK 2)

### Scolopendra subspinipes mutilans attenuates neuroinflammation in a mouse model of ALS.

**Pubmed Data** : J Neuroinflammation. 2013 ;10:131. Epub 2013 Oct 29. PMID: [24168240](#)

**Article Published Date** : Dec 31, 2012

**Authors** : MuDan Cai, Sun-Mi Choi, Bong Keun Song, Ilhong Son, Sungchul Kim, Eun Jin Yang

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Scolopendra subspinipes mutilans](#) : CK(2) : AC(1)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

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## Sea Cucumber (AC 1) (CK 10)

### Sea cucumber improves thyroid and cognitive function in patients with Alzheimer's disease.

**Pubmed Data** : Zhongguo Zhong Xi Yi Jie He Za Zhi. 2007 Feb;27(2):110-3. PMID: [17342994](#)

**Article Published Date** : Feb 01, 2007

**Authors** : Zhi-Lin Zhou, Li-Zhen Liang, Yong-Xing Yan

**Study Type** : Human Study

**Additional Links**

**Substances** : [Sea Cucumber](#) : CK(23) : AC(8)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

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## Selenium (AC 2) (CK 11)

**A large body of studies suggests that selenium (Se), either as Se-containing compounds or as selenoproteins, may be beneficial in reducing Alzheimer's pathology.**

**Pubmed Data** : Curr Top Med Chem. 2015 Aug 26. Epub 2015 Aug 26. PMID: [26311427](#)

**Article Published Date** : Aug 25, 2015

**Authors** : Du Xiubo, Wang Chao, Liu Qiong

**Study Type** : Review

**Additional Links**

**Substances** : [Selenium](#) : CK(784) : AC(139)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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**Selenium, glutathione, copper/zinc and superoxide dismutase may have therapeutic value in ALS.**

**Pubmed Data** : Scand J Rheumatol. 1995;24(2):85-93. PMID: [9726810](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Apostolski, Z Marinković, A Nikolić, D Blagojević, M B Spasić, A M Michelson

**Study Type** : Human Study

**Additional Links**

**Substances** : [Antioxidant formulas](#) : CK(492) : AC(76) , [Copper](#) : CK(83) : AC(17) , [Glutathione](#) : CK(61) : AC(16) , [Selenium](#) : CK(784) : AC(139) , [Superoxide dismutase](#) : CK(16) : AC(5) , [Zinc](#) : CK(941) : AC(139)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Calcium Channel Blockers](#) : CK(87) : AC(23)

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## Sesame Seeds (AC 1) (CK 1)

**A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.**

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : Chromium : CK(56) : AC(12) , Cinnamon : CK(243) : AC(88) , Cocoa : CK(522) : AC(77) , DHA (Docosahexaenoic Acid) : CK(783) : AC(129) , Fish Oil : CK(701) : AC(111) , Folic Acid : CK(643) : AC(93) , Genistein : CK(515) : AC(228) , Hops : CK(76) : AC(26) , Policosanol : CK(194) : AC(25) , Sesame Seeds : CK(235) : AC(71) , Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Neurodegenerative Diseases : CK(3370) : AC(846)

## Silibinin (AC 3) (CK 6)

### Silibinin ameliorated the impairment of learning and memory of LPS-injection rats.

**Pubmed Data** : Neurochem Res. 2016 Mar 9. Epub 2016 Mar 9. PMID: [26961891](#)

**Article Published Date** : Mar 08, 2016

**Authors** : Xiaoyu Song, Biao Zhou, Pingping Zhang, Di Lei, Yubin Wang, Guodong Yao, Toshihiko Hayashi, Mingyu Xia, Shin-Ichi Tashiro, Satoshi Onodera, Takashi Ikejima

**Study Type** : Animal Study

**Additional Links**

**Substances** : Silibinin : CK(117) : AC(56)

**Diseases** : Brain Inflammation : CK(246) : AC(140) , Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216) , Memory Disorders : CK(340) : AC(103) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

### Silibinin could be a potential candidate for the therapy of neurodegenerative disorders.

**Pubmed Data** : Neurosci Lett. 2016 Jun 6 ;629:256-261. Epub 2016 Jun 6. PMID: [27276653](#)

**Article Published Date** : Jun 05, 2016

**Authors** : Ge Jin, Dafeng Bai, Shiliang Yin, Zhihang Yang, Dan Zou, Zhong Zhang, Xiaoxiu Li, Yan Sun, Qiwen Zhu

**Study Type** : Animal Study

**Additional Links**

**Substances** : Silibinin : CK(117) : AC(56)

**Diseases** : Brain Inflammation : CK(246) : AC(140) , Neurodegenerative Diseases : CK(3370) :

AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Interleukin-4 downregulation : CK(119) : AC(34), Interleukin-6 Downregulation : CK(1078) : AC(337)

## Silibinin protected dopaminergic neurons in an acute MPTP-induced mouse model of Parkinson's disease.

**Pubmed Data** : Brain Res. 2015 Nov 19 ;1627:233-42. Epub 2015 Oct 3. PMID: [26434409](#)

**Article Published Date** : Nov 18, 2015

**Authors** : Yujeong Lee, Hye Jeong Chun, Kyung Moon Lee, Young-Suk Jung, Jaewon Lee

**Study Type** : Animal Study

**Additional Links**

**Substances** : Silibinin : CK(117) : AC(56)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574), Neuroprotective Agents : CK(2235) : AC(1052)

## Silica (AC 1) (CK 10)

### Silicic acid may reduce the body burden of aluminium in Alzheimer's patients.

**Pubmed Data** : Am J Obstet Gynecol. 2006 Dec;195(6):1693-9. Epub 2006 Jun 21. PMID: [16988476](#)

**Article Published Date** : Dec 01, 2006

**Authors** : Christopher Exley, Olga Korchazhkina, Deborah Job, Stanislav Strekopytov, Anthony Polwart, Peter Crome

**Study Type** : Human Study

**Additional Links**

**Substances** : Silica : CK(12) : AC(3), Silica: Orthosilicic acid : CK(40) : AC(4)

**Diseases** : Aluminum Toxicity : CK(195) : AC(75), Alzheimer's Disease : CK(1283) : AC(376)

**Pharmacological Actions** : Detoxifier : CK(408) : AC(131)

## Silica: Orthosilicic acid (AC 1) (CK 10)

### Silicic acid may reduce the body burden of aluminium in Alzheimer's patients.

**Pubmed Data** : Am J Obstet Gynecol. 2006 Dec;195(6):1693-9. Epub 2006 Jun 21. PMID: [16988476](#)

**Article Published Date** : Dec 01, 2006

**Authors** : Christopher Exley, Olga Korchazhkina, Deborah Job, Stanislav Strekopytov, Anthony Polwart, Peter Crome

**Study Type** : Human Study

#### Additional Links

**Substances** : Silica : CK(12) : AC(3), Silica: Orthosilicic acid : CK(40) : AC(4)

**Diseases** : Aluminum Toxicity : CK(195) : AC(75), Alzheimer's Disease : CK(1283) : AC(376)

**Pharmacological Actions** : Detoxifier : CK(408) : AC(131)

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## Soy (AC 1) (CK 2)

### Soy meal is a potential alternative to estrogen in the prevention and treatment of Alzheimer's disease.

**Pubmed Data** : Pak J Biol Sci. 2008 Apr 15;11(8):1114-9. PMID: [18819549](#)

**Article Published Date** : Apr 15, 2008

**Authors** : Alireza Sarkaki, Reza Amani, Mohammad Badavi, Ahmad Z Moghaddam, Hadi Aligholi, Maryam Safahani, Mohammad H Haghighizadeh

**Study Type** : Animal Study

#### Additional Links

**Substances** : Isoflavones : CK(631) : AC(129), Soy : CK(1787) : AC(399)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Dementia : CK(571) : AC(79), Estrogen Deficiency : CK(57) : AC(19), Learning disorders : CK(188) : AC(50)

**Additional Keywords** : Natural Substances Versus Drugs : CK(1694) : AC(300), Ovariectomy-Induced Changes : CK(80) : AC(37)

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## Soy Protein (AC 1) (CK 2)

**Soy meal may have the potential neuroprotective effect against post-menopausal cognitive deficiency and weight gain.**

**Pubmed Data** : Pak J Biol Sci. 2009 Oct 15;12(20):1338-45. PMID: [20128500](#)

**Article Published Date** : Oct 15, 2009

**Authors** : A Sarkaki, M Badavi, H Aligholi, A Zand Moghaddam

**Study Type** : Animal Study

**Additional Links**

**Substances** : Isoflavones : CK(631) : AC(129), Soy Protein : CK(331) : AC(56)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163), Perimenopausal Syndrome : CK(52) : AC(6), Postmenopausal Disorders: Weight Gain/Obesity : CK(4) : AC(2)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Ovariectomy-Induced Changes : CK(80) : AC(37)

## Spirulina (AC 3) (CK 6)

**A polysaccharide obtained from Spirulina platensis plays a protective role against the MPTP-induced loss of dopaminergic neurons in C57BL/6J mice.**

**Pubmed Data** : Neural Regen Res. 2015 Feb ;10(2):308-13. PMID: [25883632](#)

**Article Published Date** : Jan 31, 2015

**Authors** : Fang Zhang, Jian Lu, Ji-Guo Zhang, Jun-Xia Xie

**Study Type** : Animal Study

**Additional Links**

**Substances** : Spirulina : CK(266) : AC(73)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Neuroprotective Agents : CK(2235) : AC(1052)

**Pretreatment with spirulina showed an anti-parkinsonism effect on behavior and anti-oxidant**

## parameters on 6-OHDA induced dopaminergic damage rats.

**Pubmed Data** : BMC Complement Altern Med. 2015 ;15:296. Epub 2015 Aug 25. PMID: [26306668](#)

**Article Published Date** : Dec 31, 2014

**Authors** : I Chattopadhyaya, Sumeet Gupta, Asad Mohammed, N Mushtaq, S Chauhan, Saikant Ghosh

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Spirulina](#) : CK(266) : AC(73)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Spirulina promotes stem cell genesis and protects against LPS induced declines in neural stem cell proliferation.

**Pubmed Data** : PLoS One. 2010;5(5):e10496. Epub 2010 May 5. PMID: [20463965](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Adam D Bachstetter, Jennifer Jernberg, Andrea Schlunk, Jennifer L Vila, Charles Hudson, Michael J Cole, R Douglas Shytle, Jun Tan, Paul R Sanberg, Cyndy D Sanberg, Cesario Borlongan, Yuji Kaneko, Naoki Tajiri, Carmelina Gemma, Paula C Bickford

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Spirulina](#) : CK(266) : AC(73)

**Diseases** : [Brain: Microglial Activation](#) : CK(82) : AC(53), [Lipopolysaccharide-Induced Toxicity](#) : CK(357) : AC(216), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Antiproliferative](#) : CK(2461) : AC(1673), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1754) : AC(642)

**Additional Keywords** : [Stem Cell Generation](#) : CK(16) : AC(5)

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## St. Johns Wort (AC 1) (CK 2)

**These findings reveal the beneficial effect of H. perforatum via attenuation of DNA fragmentation, astrogliosis, inflammation, and oxidative stress.**

**Pubmed Data** : Cell Mol Neurobiol. 2015 Jun 29. Epub 2015 Jun 29. PMID: [26119304](#)

**Article Published Date** : Jun 28, 2015

**Authors** : Zahra Kiasalari, Tourandokht Baluchnejadmojarad, Mehrdad Roghani

**Study Type** : Animal Study

**Additional Links**

**Substances** : [St. Johns Wort](#) : CK(191) : AC(54)

**Diseases** : [Brain: Oxidative Stress](#) : CK(75) : AC(44), [Brain Inflammation](#) : CK(246) : AC(140), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Plant Extracts](#) : CK(7288) : AC(2419)

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## Stilbenes (AC 10) (CK 13)

### Resveratrol may have neuroprotective properties in Alzheimer's disease.

**Pubmed Data** : Ann N Y Acad Sci. 2011 Jan;1215:103-8. PMID: [21261647](#)

**Article Published Date** : Jan 01, 2011

**Authors** : Tristan Richard, Alison D Pawlus, Marie-Laure Iglésias, Eric Pedrot, Pierre Waffo-Teguo, Jean-Michel Mérillon, Jean-Pierre Monti

**Study Type** : Review

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737), [Stilbenes](#) : CK(136) : AC(101)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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### Resveratrol attenuates 6-hydroxydopamine-induced oxidative damage and dopamine depletion in rat model of Parkinson's disease.

**Pubmed Data** : Brain Res. 2010 Apr 30;1328:139-51. Epub 2010 Feb 16. PMID: [20167206](#)

**Article Published Date** : Apr 30, 2010

**Authors** : Mohd Moshahid Khan, Ajmal Ahmad, Tauheed Ishrat, M Badruzzaman Khan, Md Nasrul Hoda, Gulrana Khuwaja, Syed Shadab Raza, Andleeb Khan, Hayate Javed, Kumar Vaibhav, Fakhrul Islam

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737), [Stilbenes](#) : CK(136) : AC(101)

**Diseases** : Dopamine Deficiency : CK(38) : AC(8) , Lipid Peroxidation : CK(692) : AC(252) , Oxidative Stress : CK(3800) : AC(1357) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Dopaminergic : CK(32) : AC(10)

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## Resveratrol has a protective effect in a cell model of amyotrophic lateral sclerosis.

**Pubmed Data** : Neurosci Lett. 2011 Oct 10 ;503(3):250-5. Epub 2011 Aug 27. PMID: [21896316](#)

**Article Published Date** : Oct 09, 2011

**Authors** : Jing Wang, Yun Zhang, Lu Tang, Nan Zhang, Dongsheng Fan

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737) , Stilbenes : CK(136) : AC(101)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Apoptotic : CK(2941) : AC(2062) , Neuroprotective Agents : CK(2237) : AC(1053) , Superoxide Dismutase Up-regulation : CK(504) : AC(169)

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## Resveratrol inhibits NF-kappa B/DNA binding activity and apoptotic cell death in an in vitro model of Alzheimer's disease.

**Pubmed Data** : Neuroreport. 1998 Feb 16;9(3):527-32. PMID: [9512401](#)

**Article Published Date** : Feb 16, 1998

**Authors** : B Draczynska-Lusiak, Y M Chen, A Y Sun

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737) , Stilbenes : CK(136) : AC(101)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Apoptotic : CK(2941) : AC(2062) , Neuroprotective Agents : CK(2235) : AC(1052) , NF-kappaB Inhibitor : CK(1100) : AC(686)

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## Resveratrol may protect against glutamate associated neurotoxicity.

**Pubmed Data** : J Neurochem. 2010 Mar;112(6):1477-87. Epub 2009 Dec 28. PMID: [20050970](#)

**Article Published Date** : Mar 01, 2010

**Authors** : Eun Ok Lee, Hee Ju Park, Jihee Lee Kang, Hye-Sun Kim, Young Hae Chong

**Study Type** : Animal Study

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737) , Stilbenes : CK(136) : AC(101)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Excitotoxicity : CK(58) : AC(35)

**Pharmacological Actions** : Enzyme Inhibitors : CK(463) : AC(250) , Interleukin-1 beta downregulation : CK(452) : AC(199) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Resveratrol upregulated heat shock proteins and extended the survival of in a mouse model of ALS.

**Pubmed Data** : Brain Res. 2012 Nov 5 ;1483:112-7. Epub 2012 Sep 19. PMID: [23000195](#)

**Article Published Date** : Nov 04, 2012

**Authors** : Soyoung Han, Jong-Ryoul Choi, Ki Soon Shin, Shin Jung Kang

**Study Type** : Animal Study

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737), Stilbenes : CK(136) : AC(101)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631), Heat Shock Protein Inducer : CK(83) : AC(30), Superoxide Dismutase Up-regulation : CK(504) : AC(169)

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## Resveratrol: a natural compound with pharmacological potential in neurodegenerative diseases.

**Pubmed Data** : CNS Neurosci Ther. 2008 ;14(3):234-47. Epub 2008 Jul 29. PMID: [18684235](#)

**Article Published Date** : Dec 31, 2007

**Authors** : Héctor I Rocha-González, Mónica Ambriz-Tututi, Vinicio Granados-Soto

**Study Type** : Review

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737), Stilbenes : CK(136) : AC(101)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140), Huntington Disease : CK(84) : AC(32), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Review: resveratrol as a therapeutic agent for neurodegenerative diseases.

**Pubmed Data** : Mol Neurobiol. 2010 Jun;41(2-3):375-83. Epub 2010 Mar 21. PMID: [20306310](#)

**Article Published Date** : Jun 01, 2010

**Authors** : Albert Y Sun, Qun Wang, Agnes Simonyi, Grace Y Sun

**Study Type** : Review

**Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737), Stilbenes : CK(136) : AC(101)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Inflammation : CK(2863) : AC(839), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3799) : AC(1356), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Apoptotic : CK(2941) : AC(2062), SIRT1 Activator : CK(39) : AC(23)

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## Review: resveratrol has neuroprotective properties.

**Pubmed Data** : Brain Res Bull. 2010 Mar 16;81(4-5):359-61. Epub 2009 Dec 21. PMID: [20026255](#)

**Article Published Date** : Mar 16, 2010

**Authors** : Bor Luen Tang

**Study Type** : Review

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737), [Stilbenes](#) : CK(136) : AC(101)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Various stilbenes inhibit Alzheimer's beta-amyloid fibrils in vitro.

**Pubmed Data** : Bioorg Med Chem. 2007 Jan 15;15(2):1160-7. Epub 2006 Oct 1. PMID: [17049256](#)

**Article Published Date** : Jan 15, 2007

**Authors** : Céline Rivière, Tristan Richard, Lysiane Quentin, Stéphanie Krisa, Jean-Michel Mérillon, Jean-Pierre Monti

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737), [Stilbenes](#) : CK(136) : AC(101)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Stilbenes](#) : CK(402) : AC(242)

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## Strawberry (AC 2) (CK 2)

**The overall objective of the present review is to update and discuss the key findings, from recent in vivo studies, on the effects of strawberries on human health.**

**Pubmed Data** : Food Funct. 2015 Mar 24. Epub 2015 Mar 24. PMID: [25803191](#)

**Article Published Date** : Mar 23, 2015

**Authors** : Francesca Giampieri, Tamara Y Forbes-Hernandez, Massimiliano Gasparrini, José M Alvarez-Suarez, Sadia Afrin, Stefano Bompadre, Josè L Quiles, Bruno Mezzetti, Maurizio Battino

**Study Type** : Review

**Additional Links**

**Substances** : [Strawberry](#) : CK(145) : AC(37)

**Diseases** : Cancers: All : CK(14297) : AC(4542) , Cardiovascular Diseases : CK(7018) : AC(887) , Diabetes Mellitus: Type 2 : CK(3344) : AC(592) , Inflammation : CK(2862) : AC(838) , Neurodegenerative Diseases : CK(3370) : AC(846) , Oxidative Stress : CK(3799) : AC(1356)  
**Pharmacological Actions** : Anti-cancer : CK(1) : AC(1) , Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630) , Cardioprotective : CK(1574) : AC(400) , Neuroprotective Agents : CK(2235) : AC(1052)  
**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244)

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## This reviews strawberry phytochemicals and their actions in combating many pathologies.

**Pubmed Data** : J Agric Food Chem. 2016 Jun 8 ;64(22):4435-49. Epub 2016 May 31. PMID: [27172913](#)

**Article Published Date** : Jun 07, 2016

**Authors** : Sadia Afrin, Massimiliano Gasparri, Tamara Y Forbes-Hernandez, Patricia Reboredo-Rodriguez, Bruno Mezzetti, Alfonso Varela-López, Francesca Giampieri, Maurizio Battino

**Study Type** : Review

### Additional Links

**Substances** : Strawberry : CK(145) : AC(37)

**Diseases** : Cancers: All : CK(14297) : AC(4542) , Cardiovascular Diseases : CK(7018) : AC(887) , Inflammation : CK(2862) : AC(838) , Metabolic Syndrome X : CK(916) : AC(158) , Neurodegenerative Diseases : CK(3370) : AC(846) , Obesity : CK(2161) : AC(455)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630)

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## Sulforaphane (AC 9) (CK 11)

### "Protective effects of the antioxidant sulforaphane on behavioral changes and neurotoxicity in mice after the administration of methamphetamine."

**Pubmed Data** : Psychopharmacology (Berl). 2012 Jul ;222(1):37-45. Epub 2011 Dec 27. PMID: [22200890](#)

**Article Published Date** : Jun 30, 2012

**Authors** : Hongxian Chen, Jin Wu, Jichun Zhang, Yuko Fujita, Tamaki Ishima, Masaomi Iyo, Kenji Hashimoto

**Study Type** : Animal Study

### Additional Links

**Substances** : Sulforaphane : CK(533) : AC(262)

**Diseases** : Amphetamine Addiction/Withdrawal : CK(36) : AC(11) , Brain: Microglial Activation : CK(82) : AC(53), Neurodegenerative Diseases : CK(3370) : AC(846)  
**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Polyphenol antioxidants have properties to treat neurodegenerative diseases.

**Pubmed Data** : Basic Clin Neurosci. 2016 Apr ;7(2):81-90. PMID: [27303602](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Amin Ataie, Mohammad Shadifar, Ramin Ataee

**Study Type** : Review

### Additional Links

**Substances** : Allicin : CK(48) : AC(25) , Carnosic Acid : CK(21) : AC(16) , Curcumin : CK(4128) : AC(2171), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Isothiocyanate : CK(15) : AC(4) , Quercetin : CK(557) : AC(246) , Resveratrol : CK(1232) : AC(737) , Rosmarinic acid : CK(21) : AC(11) , Sulforaphane : CK(533) : AC(262)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630) , Neuroprotective Agents : CK(2235) : AC(1052)

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## Sulforaphane has a protective effect against dopaminergic cell death.

**Pubmed Data** : J Pharmacol Exp Ther. 2007 Apr;321(1):249-56. Epub 2007 Jan 26. PMID: [17259450](#)

**Article Published Date** : Apr 01, 2007

**Authors** : Ji Man Han, Yong Jin Lee, So Yeon Lee, Eun Mee Kim, Younghye Moon, Ha Won Kim, Onyou Hwang

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Sulforaphane : CK(533) : AC(262)

**Diseases** : Dopamine Deficiency : CK(38) : AC(8) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201) , Neuroprotective Agents : CK(2237) : AC(1053)

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## Sulforaphane may have therapeutic role in Parkinson's disease due to its neuroprotective effect.

**Pubmed Data** : J Neurochem. 2009 Dec;111(5):1161-71. Epub 2009 Sep 22. PMID: [19780897](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Andrea Tarozi, Fabiana Morroni, Adriana Merlicco, Silvana Hrelia, Cristina Angeloni, Giorgio Cantelli-Forti, Patrizia Hrelia

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Sulforaphane](#) : CK(533) : AC(262)

**Diseases** : [Oxidative Stress](#) : CK(3800) : AC(1357) , [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Anticarcinogenic Agents](#) : CK(1071) : AC(514) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Sulforaphane may protect against neurodegenerative disease.

**Pubmed Data** : Free Radic Biol Med. 2007 Sep 1;43(5):809-17. Epub 2007 May 31. PMID: [17664144](#)

**Article Published Date** : Sep 01, 2007

**Authors** : Mi-Kyoung Kwak, Jeong-Min Cho, Bo Huang, Soona Shin, Thomas W Kensler

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Sulforaphane](#) : CK(533) : AC(262)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053) , [Proteasome Inhibitors](#) : CK(51) : AC(33)

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## Sulforaphane may protect against substantia nigra degeneration associated with diseases such as Parkinson's.

**Pubmed Data** : Mol Nutr Food Res. 2010 Apr;54(4):532-42. PMID: [20166144](#)

**Article Published Date** : Apr 01, 2010

**Authors** : David Vauzour, Maria Buonfiglio, Giulia Corona, Joselita Chirafisi, Katerina Vafeiadou, Cristina Angeloni, Silvana Hrelia, Patrizia Hrelia, Jeremy P E Spencer

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Sulforaphane](#) : CK(533) : AC(262)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Parkinson's Disease](#) : CK(525) : AC(163) , [Striatonigral Degeneration: Autosomal Dominant](#) : CK(1) : AC(1)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062) , [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Sulforaphane might be a promising therapeutic agent for cognitive enhancement in Alzheimer's disease.

**Pubmed Data** : Neurochem Res. 2016 Jun 2. Epub 2016 Jun 2. PMID: [27255600](#)

**Article Published Date** : Jun 01, 2016

**Authors** : Venugopalan Rajesh, Sakthivel Ilanthalir

**Study Type** : Animal Study

#### Additional Links

**Substances** : Sulforaphane : CK(533) : AC(262)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Sulforaphane protects against amyloid beta cytotoxicity.

**Pubmed Data** : Obesity (Silver Spring). 2009 Aug 13. Epub 2009 Aug 13. PMID: [19183883](#)

**Article Published Date** : Aug 13, 2009

**Authors** : Hyun-Min Park, Jung-Ae Kim, Mi-Kyoung Kwak

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Sulforaphane : CK(533) : AC(262)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Neuroprotective Agents : CK(2235) : AC(1052), Proteasome Inhibitors : CK(51) : AC(33)

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## The phytochemical sulforaphane has a potential application in Alzheimer's disease therapeutics.

**Pubmed Data** : Neurobiol Aging. 2016 Feb ;38:1-10. Epub 2015 Oct 23. PMID: [26827637](#)

**Article Published Date** : Jan 31, 2016

**Authors** : Ye Won An, Kyoung A Jhang, So-Youn Woo, Jihee Lee Kang, Young Hae Chong

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Sulforaphane : CK(533) : AC(262)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Antioxidants : CK(7191) : AC(2630), Heme oxygenase-1 up-regulation : CK(69) : AC(38) , Neuroprotective Agents : CK(2235) : AC(1052), Nrf2 activation : CK(172) : AC(83)

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## Superoxide dismutase (AC 1) (CK 10)

### Selenium, glutathione, copper/zinc and superoxide dismutase may have therapeutic value in ALS.

**Pubmed Data** : Scand J Rheumatol. 1995;24(2):85-93. PMID: [9726810](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Apostolski, Z Marinković, A Nikolić, D Blagojević, M B Spasić, A M Michelson

**Study Type** : Human Study

**Additional Links**

**Substances** : [Antioxidant formulas](#) : CK(492) : AC(76), [Copper](#) : CK(83) : AC(17), [Glutathione](#) : CK(61) : AC(16), [Selenium](#) : CK(784) : AC(139), [Superoxide dismutase](#) : CK(16) : AC(5), [Zinc](#) : CK(941) : AC(139)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions** : [Calcium Channel Blockers](#) : CK(87) : AC(23)

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## Sweet Cherry (AC 1) (CK 1)

**Cherries are rich in phenolics which have antineurodegenerative activity.**

**Pubmed Data** : J Agric Food Chem. 2005 Dec 28;53(26):9921-7. PMID: [16366675](#)

**Article Published Date** : Dec 28, 2005

**Authors** : Dae-Ok Kim, Ho Jin Heo, Young Jun Kim, Hyun Seuk Yang, Chang Y Lee

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Sweet Cherry](#) : CK(12) : AC(3)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Sweet Potato: Purple (AC 1) (CK 2)

**A purple sweet potato extract rich in caffeoylquinic acids had a neuroprotective effect on mouse brain and could improve the spatial learning and memory.**

**Pubmed Data** : J Agric Food Chem. 2013 May 29 ;61(21):5037-45. Epub 2013 May 16. PMID: [23647122](#)

**Article Published Date** : May 28, 2013

**Authors** : Kazunori Sasaki, Junkyu Han, Hidetoshi Shimozone, Myra O Villareal, Hiroko Isoda

**Study Type** : Animal Study

**Additional Links**

**Substances** : Anthocyanins : CK(332) : AC(114), Caffeoylquinic Acids : CK(1) : AC(1), Sweet Potato: Purple : CK(43) : AC(26)

**Diseases** : Learning disorders : CK(188) : AC(50) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Tangeretin (AC 2) (CK 3)

### Nchinpi extracts potently facilitated CRE-mediated transcription in cultured hippocampal neurons.

**Pubmed Data** : J Neural Transm. 2013 Oct ;120(10):1397-409. Epub 2013 Apr 16. PMID: [23588349](#)

**Article Published Date** : Sep 30, 2013

**Authors** : Ichiro Kawahata, Masaaki Yoshida, Wen Sun, Akira Nakajima, Yanxin Lai, Naoya Osaka, Kentaro Matsuzaki, Akihito Yokosuka, Yoshihiro Mimaki, Akira Naganuma, Yoshihisa Tomioka, Tohru Yamakuni

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Citrus Peel : CK(65) : AC(8), Nobiletin : CK(34) : AC(1), Orange: Mandarin : CK(6) : AC(2), Tangeretin : CK(17) : AC(9)

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79) , Learning disorders : CK(188) : AC(50) , Neurologic Disorders : CK(65) : AC(29)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244) , Plant Extracts : CK(7288) : AC(2419)

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### Tangerine peel possesses potent anti-neuroinflammatory capacity which is attributed to the collective effect of hesperidin, nobiletin, and tangeretin.

**Pubmed Data** : Food Chem Toxicol. 2014 Sep ;71:176-82. Epub 2014 Jun 20. PMID: [24955543](#)

**Article Published Date** : Aug 31, 2014

**Authors** : Su-Chen Ho, Chun-Ting Kuo

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : Citrus Peel : CK(65) : AC(8), Hesperidin : CK(196) : AC(53), Nobiletin : CK(34) : AC(1), Tangeretin : CK(17) : AC(9)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Inflammation : CK(2863) : AC(839), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573), Interleukin-1 beta downregulation : CK(452) : AC(199), Interleukin-6 Downregulation : CK(1078) : AC(337), Neuroprotective Agents : CK(2235) : AC(1052), Nitric Oxide Inhibitor : CK(223) : AC(108), Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Natural Substance Synergy : CK(534) : AC(244), Plant Extracts : CK(7288) : AC(2419)

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## Tannic Acid (AC 1) (CK 1)

**Pomegranate may offer an attractive dietary strategy for the prevention and treatment of AGE-related diseases such as type-2 diabetes and Alzheimer's disease.**

**Pubmed Data** : Food Funct. 2014 Nov ;5(11):2996-3004. PMID: [25233108](#)

**Article Published Date** : Oct 31, 2014

**Authors** : Weixi Liu, Hang Ma, Leslie Frost, Tao Yuan, Joel A Dain, Navindra P Seeram

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Ellagic Acid : CK(104) : AC(55), Pomegranate : CK(499) : AC(168), Punicalagin : CK(10) : AC(7), Tannic Acid : CK(25) : AC(21)

**Diseases** : Advanced Glycation End products (AGE) : CK(231) : AC(73), Alzheimer's Disease : CK(1282) : AC(375), Diabetes Mellitus: Type 2: Prevention : CK(646) : AC(83)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Tauroursodeoxycholic acid (AC 1) (CK 1)

**Tauroursodeoxycholic acid (TUDCA) may have therapeutic value in neurodegenerative illnesses.**

**Pubmed Data** : Glob Adv Health Med. 2014 May ;3(3):58-69. PMID: [24891994](#)

**Article Published Date** : Apr 30, 2014

**Authors** : Sheila Vang, Katie Longley, Clifford J Steer, Walter C Low

**Study Type** : Review

**Additional Links**

**Substances** : Tauroursodeoxycholic acid : CK(2) : AC(2)

**Diseases** : Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140) , Huntington Disease : CK(84) : AC(32), Multiple Sclerosis : CK(953) : AC(182) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Apoptotic : CK(362) : AC(202)

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## Tea (AC 1) (CK 1)

**This review collates the current knowledge of tea polyphenols and puts into perspective their potential to be considered as nutraceuticals that target various pathologies in PD.**

**Pubmed Data** : Adv Exp Med Biol. 2015;863:117-137. PMID: [26092629](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Mario Caruana, Neville Vassallo

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333), Tea : CK(1840) : AC(385), Theaflavins : CK(1) : AC(1)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59), Neuroprotective Agents : CK(2237) : AC(1053)

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## Testosterone (AC 3) (CK 14)

**Free testosterone is significantly decreased in ALS,**

## indicating that supplementation with testosterone may have a therapeutic role in ALS treatment.

**Pubmed Data** : J Neurol Sci. 2002 Mar 15;195(1):67-70. PMID: [11867076](#)

**Article Published Date** : Mar 15, 2002

**Authors** : Alessandra Militello, Gaetano Vitello, Christian Lunetta, Antonio Toscano, Gianni Maiorana, Tommaso Piccoli, Vincenzo La Bella

**Study Type** : Human Study

**Additional Links**

**Substances** : [Testosterone](#) : CK(164) : AC(29)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## Steroid hormones may have neuroprotective properties in ALS.

**Pubmed Data** : Cell Mol Neurobiol. 2001 Jun;21(3):237-54. PMID: [11569536](#)

**Article Published Date** : Jun 01, 2001

**Authors** : M C González Deniselle, S L González, A F De Nicola

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Estradiol \(E\(2\)\)](#) : CK(22) : AC(15), [Progesterone](#) : CK(70) : AC(26), [Testosterone](#) : CK(164) : AC(29)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140), [Motor Neuron Disease](#) : CK(464) : AC(102)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Testosterone may have neuroprotective properties.

**Pubmed Data** : Neurosci Lett. 2009 Nov 13;465(2):123-7. Epub 2009 Sep 6. PMID: [19735695](#)

**Article Published Date** : Nov 13, 2009

**Authors** : Randall E Wilson, Kellie D Coons, Dale R Sengelaub

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Testosterone](#) : CK(164) : AC(29)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140), [Brain Damage](#) : CK(93) : AC(44), [Motor Neuron Disease](#) : CK(464) : AC(102)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Tetrahydrocurcumin (AC 1) (CK 2)

**Both curcumin and its metabolite tetrahydrocurcumin exert neuroprotection against chemically-induced neurotoxicity.**

**Pubmed Data** : Inflammopharmacology. 2008 Apr;16(2):96-9. PMID: [18408903](#)

**Article Published Date** : Apr 01, 2008

**Authors** : A Rajeswari, M Sabesan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Tetrahydrocurcumin : CK(66) : AC(30)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Theaflavins (AC 1) (CK 1)

**This review collates the current knowledge of tea polyphenols and puts into perspective their potential to be considered as nutraceuticals that target various pathologies in PD.**

**Pubmed Data** : Adv Exp Med Biol. 2015;863:117-137. PMID: [26092629](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Mario Caruana, Neville Vassallo

**Study Type** : Review

**Additional Links**

**Substances** : Black Tea : CK(360) : AC(80), EGCG (Epigallocatechin gallate) : CK(606) : AC(312), Green Tea : CK(1934) : AC(549), Polyphenols : CK(920) : AC(333), Tea : CK(1840) : AC(385), Theaflavins : CK(1) : AC(1)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59), Neuroprotective Agents : CK(2237) : AC(1053)

## Theanine (AC 3) (CK 5)

### L-theanine attenuates beta-amyloid-induced cognitive dysfunction and neurotoxicity.

**Pubmed Data** : Free Radic Biol Med. 2009 Dec 1;47(11):1601-10. Epub 2009 Sep 16. PMID: [19766184](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Tae Il Kim, Yong Kyung Lee, Sang Gi Park, Im Seop Choi, Jung Ok Ban, Hyoung Kook Park, Sang-Yoon Nam, Young Won Yun, Sang Bae Han, Ki Wan Oh, Jin Tae Hong

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Theanine](#) : CK(102) : AC(21)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

### L-theanine protects against glutamate-induced excitotoxicity in a mouse model.

**Pubmed Data** : Neuroscience. 2010 Jul 14;168(3):778-86. Epub 2010 Apr 21. PMID: [20416364](#)

**Article Published Date** : Jul 14, 2010

**Authors** : X Di, J Yan, Y Zhao, J Zhang, Z Shi, Y Chang, B Zhao

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Theanine](#) : CK(102) : AC(21)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Excitotoxicity](#) : CK(58) : AC(35)

### L-theanine provides neuroprotection against Parkinson's disease related pesticide neurotoxicants.

**Pubmed Data** : Neurotoxicology. 2008 Jul;29(4):656-62. Epub 2008 Mar 20. PMID: [18452993](#)

**Article Published Date** : Jul 01, 2008

**Authors** : Hong-Suk Cho, Seung Kim, Sook-Young Lee, Jeong Ae Park, Sung-Jun Kim, Hong Sung Chun

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Theanine](#) : CK(102) : AC(21)

**Diseases :** [Parkinson's Disease : CK\(525\) : AC\(163\)](#) , [Pesticide Toxicity : CK\(188\) : AC\(59\)](#)  
**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## Thiamine (B-1) (AC 1) (CK 10)

### Vitamin supplementation leads to reduced levels of carbonyl proteins in patients.

**Pubmed Data :** [Neurodegener Dis. 2016 ;16\(3-4\):284-9. Epub 2015 Nov 21. PMID: 26587902](#)

**Article Published Date :** Dec 31, 2015

**Authors :** Paulus S Rommer, Dietmar Fuchs, Friedrich Leblhuber, Rainer Schroth, Michaela Greilberger, Erwin Tafeit, Joachim Greilberger

**Study Type :** Human Study

#### Additional Links

**Substances :** [Folic Acid : CK\(643\) : AC\(93\)](#), [Thiamine \(B-1\) : CK\(106\) : AC\(18\)](#), [Vitamin B-12 : CK\(770\) : AC\(103\)](#), [Vitamin B-6 : CK\(435\) : AC\(54\)](#)

**Diseases :** [Alzheimer's Disease : CK\(1282\) : AC\(375\)](#) , [Cognitive Decline/Dysfunction : CK\(1138\) : AC\(212\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## Thymoquinone (AC 7) (CK 8)

### A review of neuropharmacology effects of nigella sativa and its main component, thymoquinone.

**Pubmed Data :** [Phytother Res. 2016 May 11. Epub 2016 May 11. PMID: 27169925](#)

**Article Published Date :** May 10, 2016

**Authors :** Soheila Javidi, Bibi Marjan Razavi, Hossein Hosseinzadeh

**Study Type :** Review

#### Additional Links

**Substances :** [Nigella sativa \(aka Black Seed\) : CK\(355\) : AC\(98\)](#) , [Thymoquinone : CK\(184\) : AC\(111\)](#)

**Diseases :** [Alzheimer's Disease : CK\(1282\) : AC\(375\)](#) , [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#), [Parkinson's Disease : CK\(525\) : AC\(163\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## Antioxidants inhibit neuronal toxicity in leucine-rich repeat kinase-2-linked Parkinson's disease.

**Pubmed Data** : Ann Clin Transl Neurol. 2016 Apr ;3(4):288-94. Epub 2016 Mar 2. PMID: [27081659](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Dario C Angeles, Patrick Ho, Brian W Dymock, Kah-Leong Lim, Zhi-Dong Zhou, Eng-King Tan

**Study Type** : Animal Study, In Vitro Study

### Additional Links

**Substances** : [Piceatannol](#) : CK(5) : AC(3), [Thymoquinone](#) : CK(184) : AC(111)

**Diseases** : [Oxidative Stress](#) : CK(3800) : AC(1357), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## The evidence presented in this paper appears to be supporting the hypothesis that Nigella sativa can enhance learning and memory.

**Pubmed Data** : Evid Based Complement Alternat Med. 2016 ;2016:6075679. Epub 2016 Feb 28. PMID: [27022403](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Mohamad Khairul Azali Sahak, Nurul Kabir, Ghulam Abbas, Suhaimi Draman, Noor Hashida Hashim, Durriyyah Sharifah Hasan Adli

**Study Type** : Review

### Additional Links

**Substances** : [Nigella sativa \(aka Black Seed\)](#) : CK(355) : AC(98), [Thymoquinone](#) : CK(184) : AC(111)

**Diseases** : [Memory Disorders](#) : CK(340) : AC(103), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Traumatic Brain Injury](#) : CK(33) : AC(9)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Thymoquinone Prevents $\beta$ -Amyloid Neurotoxicity in Primary Cultured Cerebellar Granule Neurons.

**Pubmed Data** : [Cell Mol Neurobiol.](#) 2013 Nov;33(8):1159-69. doi: 10.1007/s10571-013-9982-z. Epub 2013 Oct 8.

**Article Published Date** : Oct 31, 2013

**Authors** : Norsharina Ismail, Maznah Ismail, Musalmah Mazlan, Latiffah Abdul Latiff, Mustapha Umar Imam, Shahid Iqbal, Nur Hanisah Azmi, Siti Aisyah Abd Ghafar, Kim Wei Chan

**Study Type** : In Vitro Study

### Additional Links

**Substances** : [Thymoquinone](#) : CK(184) : AC(111)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

## Thymoquinone might be usefulness in delaying the onset of inflammation-mediated neurodegenerative disorders involving activated microglia cells.

**Pubmed Data :** [J Neuroimmunol. 2015 Sep 15 ;286:5-12. Epub 2015 Jun 27. PMID: 26298318](#)

**Article Published Date :** Sep 14, 2015

**Authors :** Equar Taka, Elizabeth A Mazzio, Carl B Goodman, Natalie Redmon, Hernan Flores-Rozas, Renee Reams, Selina Darling-Reed, Karam F A Soliman

**Study Type :** In Vitro Study

### Additional Links

**Substances :** [Thymoquinone : CK\(184\) : AC\(111\)](#)

**Diseases :** [Brain Inflammation : CK\(246\) : AC\(140\)](#), [Neurodegenerative Diseases : CK\(3370\) : AC\(846\)](#)

**Pharmacological Actions :** [Anti-Inflammatory Agents : CK\(4500\) : AC\(1574\)](#)

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## Thymoquinone protects cultured hippocampal and human induced pluripotent stem cells-derived neurons against $\alpha$ -synuclein-induced synapse damage.

**Pubmed Data :** [Neurosci Lett. 2013 Sep 27. pii: S0304-3940\(13\)00873-2. doi: 10.1016/j.neulet.2013.09.049. PMID: 24080376](#)

**Article Published Date :** Sep 26, 2013

**Authors :** A H Alhebshi, A Odawara, M Gotoh, I Suzuki

**Study Type :** In Vitro Study

### Additional Links

**Substances :** [Thymoquinone : CK\(184\) : AC\(111\)](#)

**Diseases :** [Lewy Body Parkinson Disease : CK\(1\) : AC\(1\)](#) , [Parkinson's Disease : CK\(525\) : AC\(163\)](#)

**Pharmacological Actions :** [Neuroprotective Agents : CK\(2237\) : AC\(1053\)](#)

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## Thymoquinone suppresses growth and invasion and induces apoptosis of glial tumor cells.

**Pubmed Data :** [Biomed Pharmacother. 2016 Jul 23 ;83:635-640. Epub 2016 Jul 23. PMID: 27459120](#)

**Article Published Date :** Jul 22, 2016

**Authors :** Ilhan Elmaci, Meric A Altinoz

**Study Type :** Review

### Additional Links

**Substances :** [Thymoquinone : CK\(184\) : AC\(111\)](#)

**Diseases :** [Glial Cell Tumors : CK\(1\) : AC\(1\)](#) , [Glioblastoma : CK\(181\) : AC\(81\)](#), [Neurodegenerative](#)

Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-metastatic : CK(610) : AC(408), Antiproliferative : CK(2461) : AC(1673), Apoptotic : CK(2941) : AC(2062), Autophagy Inhibitors : CK(26) : AC(13), Telomerase Inhibitor : CK(52) : AC(34)

**Additional Keywords** : Blood Brain Barrier : CK(32) : AC(12)

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## Tibetan Herbal Formula: Padma 28 (AC 1) (CK 1)

**The herbal preparation Padma® 28 protects against neurotoxicity in PC12 cells.**

**Pubmed Data** : Phytother Res. 2011 May ;25(5):740-3. Epub 2011 Mar 17. PMID: [21413090](#)

**Article Published Date** : Apr 30, 2011

**Authors** : Isaac Ginsburg, Lea Rozenstein-Tsalkovich, Erez Koren, Hanna Rosenmann

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Tibetan Herbal Formula: Padma 28 : CK(22) : AC(5)

**Diseases** : Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140) , Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Tocotrienol: Delta (AC 1) (CK 2)

**The oral administration of delta tocotrienol may be useful in the treatment of Parkinson's disease patients.**

**Pubmed Data** : Neurosci Lett. 2015 Oct 30. Epub 2015 Oct 30. PMID: [26523792](#)

**Article Published Date** : Oct 29, 2015

**Authors** : Kazuhiro Nakaso, Yosuke Horikoshi, Toru Takahashi, Takehiko Hanaki, Masato Nakasone, Yoshinori Kitagawa, Taisuke Koike, Tatsuya Matsura

**Study Type** : Animal Study

**Additional Links**

**Substances** : Tocotrienol: Delta : CK(42) : AC(22) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Problem Substances** : Tamoxifen : CK(338) : AC(51)

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## Toona sinensis (AC 1) (CK 1)

**Extracts of Toona sinensis leaves could be used in the treatment of neurodegenerative diseases by inhibition of inflammatory mediator production in activated microglia.**

**Pubmed Data** : Kaohsiung J Med Sci. 2014 Feb ;30(2):73-81. Epub 2013 Nov 1. PMID: [24444536](#)

**Article Published Date** : Jan 31, 2014

**Authors** : Chao-Chuan Wang, Yee-Jean Tsai, Ya-Ching Hsieh, Rong-Jyh Lin, Chih-Lung Lin

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : Toona sinensis : CK(15) : AC(1)

**Diseases** : Brain: Microglial Activation : CK(82) : AC(53) , Brain Inflammation : CK(246) : AC(140), Lipopolysaccharide-Induced Toxicity : CK(357) : AC(216) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574) , Tumor Necrosis Factor (TNF) Alpha Inhibitor : CK(1752) : AC(641)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Triptolide (AC 1) (CK 1)

**Triptolide will repair the neurological damage in Alzheimer's disease caused by deposition of amyloid beta-peptide 25–35 via the autophagy pathway.**

**Pubmed Data** : PLoS One. 2015 ;10(11):e0142719. Epub 2015 Nov 10. PMID: [26554937](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Pengjuan Xu, Zhigui Li, Hui Wang, Xiaochen Zhang, Zhuo Yang

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Triptolide](#) : CK(11) : AC(9)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Turmeric (AC 3) (CK 4)

**Aromatic turmerone constitutes a promising candidate to support regeneration in neurologic disease.**

**Pubmed Data** : Stem Cell Res Ther. 2014 ;5(4):100. Epub 2014 Sep 26. PMID: [25928248](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Joerg Hucklenbroich, Rebecca Klein, Bernd Neumaier, Rudolf Graf, Gereon Rudolf Fink, Michael Schroeter, Maria Adele Rueger

**Study Type** : Animal Study, In Vitro Study

**Additional Links**

**Substances** : [Turmeric](#) : CK(4951) : AC(2343), [Turmerones](#) : CK(9) : AC(6)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Neurologic Disorders](#) : CK(65) : AC(29)

**Pharmacological Actions** : [Neurogenesis](#) : CK(59) : AC(30), [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400), [Dose Response](#) : CK(1035) : AC(400)

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**Aromatic-turmerone offers new possibilities for tackling neurodegeneration.**

**Pubmed Data** : Stem Cell Res Ther. 2014 ;5(6):127. Epub 2014 Nov 17. PMID: [25688994](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Steven W Poser, Andreas Androutsellis-Theotokis

**Study Type** : Review

**Additional Links**

**Substances** : [Turmeric](#) : CK(4951) : AC(2343), [Turmerones](#) : CK(9) : AC(6)

**Diseases** : [Brain Inflammation](#) : CK(246) : AC(140), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Stroke: Attenuation/Recovery](#) : CK(345) : AC(74)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Long-term consumption of aromatic compounds from spices could be effective in the prevention of Alzheimer's disease.

**Pubmed Data** : Nat Prod Commun. 2016 Apr ;11(4):507-10. PMID: [27396206](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Shinichi Matsumura, Kazuya Murata, Yuri Yoshioka, Hideaki Matsuda

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Cardamom : CK(39) : AC(9), Cinnamon : CK(243) : AC(88), Ginger : CK(676) : AC(175), Long Pepper : CK(14) : AC(8), Turmeric : CK(4951) : AC(2343)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053),  $\beta$ -secretase Inhibitor : CK(1) : AC(1)

## Turmerones (AC 2) (CK 3)

### Aromatic turmerone constitutes a promising candidate to support regeneration in neurologic disease.

**Pubmed Data** : Stem Cell Res Ther. 2014 ;5(4):100. Epub 2014 Sep 26. PMID: [25928248](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Joerg Hucklenbroich, Rebecca Klein, Bernd Neumaier, Rudolf Graf, Gereon Rudolf Fink, Michael Schroeter, Maria Adele Rueger

**Study Type** : Animal Study, In Vitro Study

### Additional Links

**Substances** : Turmeric : CK(4951) : AC(2343), Turmerones : CK(9) : AC(6)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Neurologic Disorders : CK(65) : AC(29)

**Pharmacological Actions** : Neurogenesis : CK(59) : AC(30), Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Dose Response : CK(1035) : AC(400), Dose Response : CK(1035) : AC(400)

### Aromatic-turmerone offers new possibilities for tackling neurodegeneration.

**Pubmed Data** : Stem Cell Res Ther. 2014 ;5(6):127. Epub 2014 Nov 17. PMID: [25688994](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Steven W Poser, Andreas Androutsellis-Theotokis

**Study Type :** Review

**Additional Links**

**Substances :** [Turmeric](#) : CK(4951) : AC(2343), [Turmerones](#) : CK(9) : AC(6)

**Diseases :** [Brain Inflammation](#) : CK(246) : AC(140), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Stroke: Attenuation/Recovery](#) : CK(345) : AC(74)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords :** [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Ubiquinol (AC 1) (CK 2)

### Coenzyme Q10 has a neuroprotective effect in an experimental model of Parkinson's disease.

**Pubmed Data :** [J Neurochem. 2008 Mar;104\(6\):1613-21. Epub 2007 Oct 31. PMID: 17973981](#)

**Article Published Date :** Mar 01, 2008

**Authors :** Carine Cleren, Lichuan Yang, Beverly Lorenzo, Noel Y Calingasan, Andrew Schomer, Anthony Sireci, Elizabeth J Wille, M Flint Beal

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Coenzyme Q10](#) : CK(941) : AC(140), [Ubiquinol](#) : CK(138) : AC(24)

**Diseases :** [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Ume (Japanese apricot) (AC 2) (CK 4)

### F. mume is a potentially valuable drug or nutraceutical for the treatment of vascular dementia.

**Pubmed Data :** [J Med Food. 2016 Feb ;19\(2\):196-204. Epub 2015 Dec 29. PMID: 26714236](#)

**Article Published Date :** Jan 31, 2016

**Authors :** Min-Soo Kim, Ji Hye Bang, Jun Lee, Jung-Soo Han, Hyung Won Kang, Won Kyung Jeon

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Ume \(Japanese apricot\)](#) : CK(28) : AC(13)

**Diseases** : Brain Inflammation : CK(246) : AC(140), Cerebral Hypoperfusion : CK(13) : AC(6) , Dementia : CK(571) : AC(79)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4500) : AC(1574)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## F. mume may have therapeutic effects on cognitive impairments in Alzheimer's disease.

**Pubmed Data** : BMC Complement Altern Med. 2016 ;16(1):54. Epub 2016 Feb 6. PMID: [26852239](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Jung-Cheol Park, Jinhua Ma, Won Kyung Jeon, Jung-Soo Han

**Study Type** : Transgenic Animal Study

**Additional Links**

**Substances** : Ume (Japanese apricot) : CK(28) : AC(13)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Ursolic Acid (AC 2) (CK 4)

### This work reveals the potential of ursolic acid as a promising treatment candidate for Parkinson's disease.

**Pubmed Data** : J Chem Neuroanat. 2015 Dec 12 ;71:41-49. Epub 2015 Dec 12. PMID: [26686287](#)

**Article Published Date** : Dec 11, 2015

**Authors** : Sachchida Nand Rai, Satyendra Kumar Yadav, Divakar Singh, Surya Pratap Singh

**Study Type** : Animal Study

**Additional Links**

**Substances** : Ursolic Acid : CK(60) : AC(39)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Neuroprotective Agents : CK(2235) : AC(1052)

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### Ursolic acid can alleviate the memory impairments induced by A $\beta$ 25-35 in mice.

**Pubmed Data** : Arq Neuropsiquiatr. 2016 Jun ;74(6):482-8. PMID: [27332074](#)

**Article Published Date** : May 31, 2016

**Authors** : Wenna Liang, Xiaoyang Zhao, Jinping Feng, Fenghua Song, Yunzhi Pan

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Ursolic Acid](#) : CK(60) : AC(39)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Antioxidants](#) : CK(7191) : AC(2630)

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## Vegetables: All (AC 2) (CK 11)

**A higher intake of food rich in antioxidants such as fruit and vegetables confer protection against the development of ALS.**

**Pubmed Data** : Life Sci. 2003 Dec 19;74(5):663-73. PMID: [19209004](#)

**Article Published Date** : Dec 19, 2003

**Authors** : K Okamoto, T Kihira, G Kobashi, M Washio, S Sasaki, T Yokoyama, Y Miyake, N Sakamoto, Y Inaba, M Nagai

**Study Type** : Human Study

**Additional Links**

**Substances** : [Fruit: All](#) : CK(3530) : AC(769) , [Vegetables: All](#) : CK(1032) : AC(113)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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**The additive and synergistic effects of phytochemicals in fruit and vegetables are responsible for their potent antioxidant and anticancer activities.**

**Pubmed Data** : Am J Clin Nutr. 2003 Sep ;78(3 Suppl):517S-520S. PMID: [12936943](#)

**Article Published Date** : Aug 31, 2003

**Authors** : Rui Hai Liu

**Study Type** : Review

**Additional Links**

**Substances** : [Fruit: All](#) : CK(3530) : AC(769) , [Polyphenols](#) : CK(920) : AC(333) , [Vegetables: All](#) : CK(1032) : AC(113)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Cancers: All](#) : CK(14297) : AC(4542) , [Cardiovascular Diseases](#) : CK(7018) : AC(887)

**Pharmacological Actions** : [Anticarcinogenic Agents](#) : CK(1071) : AC(514) , [Antioxidants](#) : CK(7191) : AC(2630) , [Cardioprotective](#) : CK(1574) : AC(400)

**Additional Keywords :** Natural Substance Synergy : CK(534) : AC(244) , The Whole is Greater than the Parts : CK(1) : AC(1)

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## Vitamin A (AC 1) (CK 1)

### Vitamin A and beta-carotene have anti-Alzheimer potential.

**Pubmed Data :** J Alzheimers Dis. 2011 Aug 2. Epub 2011 Aug 2. PMID: [21811022](#)

**Article Published Date :** Aug 02, 2011

**Authors :** Junichi Takasaki, Kenjiro Ono, Yuji Yoshiike, Mie Hirohata, Tokuhei Ikeda, Akiyoshi Morinaga, Akihiko Takashima, Masahito Yamada

**Study Type :** In Vitro Study

**Additional Links**

**Substances :** [beta-Carotene](#) : CK(318) : AC(53) , [Vitamin A](#) : CK(498) : AC(77)

**Diseases :** [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions :** [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Vitamin B-12 (AC 10) (CK 82)

### A multi-vitamin/nutrient formula has therapeutic value in moderate-stage to later-stage Alzheimer's disease.

**Pubmed Data :** Am J Alzheimers Dis Other Dement. 2009 Feb-Mar;24(1):27-33. Epub 2008 Dec 3. PMID: [19056706](#)

**Article Published Date :** Feb 01, 2009

**Authors :** Ruth Remington, Amy Chan, James Paskavitz, Thomas B Shea

**Study Type :** Human Study

**Additional Links**

**Substances :** [Carnitine](#), [Acetyl-L-](#) : CK(40) : AC(4) , [Folic Acid](#) : CK(643) : AC(93) , [NAC \(N-acetyl-L-cysteine\)](#) : CK(295) : AC(72) , [SAdoMet \(S-adenosylmethionine\)](#) : CK(113) : AC(20) , [Vitamin B-12](#) : CK(770) : AC(103) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases :** [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## B vitamins appear to slow cognitive and clinical decline in people with mild cognitive impairment, in particular in those with elevated homocysteine.

**Pubmed Data** : Int J Geriatr Psychiatry. 2011 Jul 21. Epub 2011 Jul 21. PMID: [21780182](#)

**Article Published Date** : Jul 21, 2011

**Authors** : Celeste A de Jager, Abderrahim Oulhaj, Robin Jacoby, Helga Refsum, A David Smith

**Study Type** : Human Study

### Additional Links

**Substances** : Folic Acid : CK(643) : AC(93), Vitamin B-12 : CK(770) : AC(103) , Vitamin B-6 : CK(435) : AC(54)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212), High Homocysteine : CK(431) : AC(63) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Homocysteine-lowering therapy may prevent bone loss in Parkinson's disease patients taking levodopa.

**Pubmed Data** : Mov Disord. 2010 Feb 15;25(3):332-40. PMID: [19938151](#)

**Article Published Date** : Feb 15, 2010

**Authors** : Seung Hun Lee, Mi Jung Kim, Beom-Jun Kim, Sung Reul Kim, Sail Chun, Jin Sook Ryu, Ghi Su Kim, Myoung Chong Lee, Jung-Min Koh, Sun Ju Chung

**Study Type** : Human Study

### Additional Links

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , Vitamin B-12 : CK(770) : AC(103)

**Diseases** : Homocystinuria : CK(10) : AC(1) , Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631)

**Additional Keywords** : Diseases that are Linked : CK(2285) : AC(299)

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## Levodopa treatment of Parkinsons disease results in hyperhomocysteinemia, which would be prevented by increased intake of vitamin b12, vitamin b6 and folate.

**Pubmed Data** : CNS Neurol Disord Drug Targets. 2008 Feb;7(1):20-7. PMID: [18289028](#)

**Article Published Date** : Feb 01, 2008

**Authors** : G Ali Qureshi, Aftab A Qureshi, Bika Ram Devrajani, M A Chippa, S Ali Syed

**Study Type** : Review

### Additional Links

**Substances** : Folic Acid : CK(643) : AC(93), Vitamin B-12 : CK(770) : AC(103) , Vitamin B-6 : CK(435) : AC(54)

**Diseases** : High Homocysteine : CK(431) : AC(63) , Parkinson's Disease : CK(526) : AC(164)

**Additional Keywords :** Diseases that are Linked : CK(2285) : AC(299)

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## Methyl Vitamin B12 rescues a motor neuron-like cell line from homocysteine-mediated cell death.

**Pubmed Data :** Toxicol Appl Pharmacol. 2011 Mar 15;251(3):217-25. Epub 2011 Jan 13. PMID: [21237187](#)

**Article Published Date :** Mar 15, 2011

**Authors :** Richelle A Hemendinger, Edward J Armstrong, Benjamin Rix Brooks

**Study Type :** In Vitro Study

### Additional Links

**Substances :** Vitamin B12: methylcobalamin : CK(55) : AC(9), Vitamin B-12 : CK(770) : AC(103)

**Diseases :** Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , High Homocysteine : CK(431) : AC(63) , Neuroblastoma : CK(81) : AC(49)

**Pharmacological Actions :** Neuroprotective Agents : CK(2237) : AC(1053)

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## Methylcobalamin may prevent muscle wasting in amyotrophic lateral sclerosis.

**Pubmed Data :** Muscle Nerve. 1998 Dec;21(12):1775-8. PMID: [9843082](#)

**Article Published Date :** Dec 01, 1998

**Authors :** R Kaji, M Kodama, A Imamura, T Hashida, N Kohara, M Ishizu, K Inui, J Kimura

**Study Type :** Human Study

### Additional Links

**Substances :** Vitamin B12: methylcobalamin : CK(55) : AC(9), Vitamin B-12 : CK(780) : AC(104)

**Diseases :** Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Vitamin B12 as methylcobalamin significantly prolongs survival time in Amyotrophic Lateral Sclerosis.

**Pubmed Data :** Brain Nerve. 2007 Oct;59(10):1141-7. PMID: [17969354](#)

**Article Published Date :** Oct 01, 2007

**Authors :** Yuishin Izumi, Ryuji Kaji

**Study Type :** Human Study

### Additional Links

**Substances :** Vitamin B12: methylcobalamin : CK(55) : AC(9), Vitamin B-12 : CK(780) : AC(104)

**Diseases :** Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Vitamin B12 deficiency may be implicated in Alzheimer's disease.

**Pubmed Data :** J Alzheimers Dis. 2010;19(2):481-8. PMID: [20110595](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Antonis Politis, Paolo Olgiati, Petros Malitas, Diego Albani, Alessandra Signorini, Letizia Polito, Stefania De Mauro, Aikaterini Zisaki, Christina Piperi, Evangelia Stamouli, Antonis Mailis, Sara Batelli, Gianluigi Forloni, Diana De Ronchi, Anastasios Kalofoutis, Ioannis Liappas, Alessandro Serretti

**Study Type** : Human Study

**Additional Links**

**Substances** : [Vitamin B-12](#) : CK(770) : AC(103)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Pharmacological Actions** : [Interleukin-6 upregulation](#) : CK(26) : AC(7)

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## Vitamin B12 deficiency may have therapeutic value in dementia patients by improving cognitive recovery.

**Pubmed Data** : J Nutr Health Aging. 2002;6(4):254-60. PMID: [12486445](#)

**Article Published Date** : Jan 01, 2002

**Authors** : A Abyad

**Study Type** : Human Study

**Additional Links**

**Substances** : [Vitamin B-12](#) : CK(770) : AC(103)

**Diseases** : [Dementia](#) : CK(571) : AC(79), [Vitamin B 12 Deficiency](#) : CK(238) : AC(39)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2325) : AC(303)

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## Vitamin supplementation leads to reduced levels of carbonyl proteins in patients.

**Pubmed Data** : Neurodegener Dis. 2016 ;16(3-4):284-9. Epub 2015 Nov 21. PMID: [26587902](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Paulus S Rommer, Dietmar Fuchs, Friedrich Leblhuber, Rainer Schroth, Michaela Greilberger, Erwin Tafeit, Joachim Greilberger

**Study Type** : Human Study

**Additional Links**

**Substances** : [Folic Acid](#) : CK(643) : AC(93), [Thiamine \(B-1\)](#) : CK(106) : AC(18), [Vitamin B-12](#) : CK(770) : AC(103), [Vitamin B-6](#) : CK(435) : AC(54)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**Vitamin B-6 (AC 6) (CK 42)**

## A multi-vitamin/nutrient formula has therapeutic value in early-stage Alzheimer's disease.

**Pubmed Data** : Am J Alzheimers Dis Other Demen. 2008 Dec-2009 Jan;23(6):571-85. Epub 2008 Dec 1. PMID: [19047474](#)

**Article Published Date** : Dec 01, 2008

**Authors** : Amy Chan, James Paskavitz, Ruth Remington, Shelly Rasmussen, Thomas B Shea

**Study Type** : Human Study

### Additional Links

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-6 : CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## B vitamins appear to slow cognitive and clinical decline in people with mild cognitive impairment, in particular in those with elevated homocysteine.

**Pubmed Data** : Int J Geriatr Psychiatry. 2011 Jul 21. Epub 2011 Jul 21. PMID: [21780182](#)

**Article Published Date** : Jul 21, 2011

**Authors** : Celeste A de Jager, Abderrahim Oulhaj, Robin Jacoby, Helga Refsum, A David Smith

**Study Type** : Human Study

### Additional Links

**Substances** : Folic Acid : CK(643) : AC(93), Vitamin B-12 : CK(770) : AC(103) , Vitamin B-6 : CK(435) : AC(54)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212), High Homocysteine : CK(431) : AC(63) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

---

## Dietary vitamin B6 consumption is inversely correlated to risk for Parkinsons disease.

**Pubmed Data** : Neurology. 2006 Jul 25;67(2):315-8. PMID: [16864826](#)

**Article Published Date** : Jul 25, 2006

**Authors** : L M L de Lau, P J Koudstaal, J C M Witteman, A Hofman, M M B Breteler

**Study Type** : Human Study

### Additional Links

**Substances** : Vitamin B-6 : CK(435) : AC(54)

**Diseases** : Parkinson's Disease : CK(526) : AC(164)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## Levodopa treatment of Parkinsons disease results in hyperhomocysteinemia, which would be prevented by increased intake of vitamin b12, vitamin b6 and folate.

**Pubmed Data** : CNS Neurol Disord Drug Targets. 2008 Feb;7(1):20-7. PMID: [18289028](#)

**Article Published Date** : Feb 01, 2008

**Authors** : G Ali Qureshi, Aftab A Qureshi, Bika Ram Devrajani, M A Chippa, S Ali Syed

**Study Type** : Review

**Additional Links**

**Substances** : Folic Acid : CK(643) : AC(93), Vitamin B-12 : CK(770) : AC(103) , Vitamin B-6 : CK(435) : AC(54)

**Diseases** : High Homocysteine : CK(431) : AC(63) , Parkinson's Disease : CK(526) : AC(164)

**Additional Keywords** : Diseases that are Linked : CK(2285) : AC(299)

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## Vitamin B6 may reduce the severity of levodopa-induced dyskinesias in Parkinson's disease.

**Pubmed Data** : Phytother Res. 2008 Sep;22(9):1162-7. PMID: [2269609](#)

**Article Published Date** : Sep 01, 2008

**Authors** : R Sandyk, R Pardeshi

**Study Type** : Commentary

**Additional Links**

**Substances** : Vitamin B-6 : CK(435) : AC(54)

**Diseases** : Dyskinesia Syndromes : CK(12) : AC(3) , Parkinson's Disease : CK(526) : AC(164)

**Additional Keywords** : Parkinson's Disease : CK(526) : AC(164) , Drug Side Effect Attenuation : CK(251) : AC(49)

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## Vitamin supplementation leads to reduced levels of carbonyl proteins in patients.

**Pubmed Data** : Neurodegener Dis. 2016 ;16(3-4):284-9. Epub 2015 Nov 21. PMID: [26587902](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Paulus S Rommer, Dietmar Fuchs, Friedrich Leblhuber, Rainer Schroth, Michaela Greilberger, Erwin Tafeit, Joachim Greilberger

**Study Type** : Human Study

**Additional Links**

**Substances** : Folic Acid : CK(643) : AC(93), Thiamine (B-1) : CK(106) : AC(18), Vitamin B-12 : CK(770) : AC(103), Vitamin B-6 : CK(435) : AC(54)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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# Vitamin B12: methylcobalamin (AC 3) (CK 21)

## Methyl Vitamin B12 rescues a motor neuron-like cell line from homocysteine-mediated cell death.

**Pubmed Data** : Toxicol Appl Pharmacol. 2011 Mar 15;251(3):217-25. Epub 2011 Jan 13. PMID: [21237187](#)

**Article Published Date** : Mar 15, 2011

**Authors** : Richelle A Hemendinger, Edward J Armstrong, Benjamin Rix Brooks

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Vitamin B12: methylcobalamin : CK(55) : AC(9), Vitamin B-12 : CK(770) : AC(103)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , High Homocysteine : CK(431) : AC(63) , Neuroblastoma : CK(81) : AC(49)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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## Methylcobalamin may prevent muscle wasting in amyotrophic lateral sclerosis.

**Pubmed Data** : Muscle Nerve. 1998 Dec;21(12):1775-8. PMID: [9843082](#)

**Article Published Date** : Dec 01, 1998

**Authors** : R Kaji, M Kodama, A Imamura, T Hashida, N Kohara, M Ishizu, K Inui, J Kimura

**Study Type** : Human Study

### Additional Links

**Substances** : Vitamin B12: methylcobalamin : CK(55) : AC(9), Vitamin B-12 : CK(780) : AC(104)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

---

## Vitamin B12 as methylcobalamin significantly prolongs survival time in Amyotrophic Lateral Sclerosis.

**Pubmed Data** : Brain Nerve. 2007 Oct;59(10):1141-7. PMID: [17969354](#)

**Article Published Date** : Oct 01, 2007

**Authors** : Yuishin Izumi, Ryuji Kaji

**Study Type** : Human Study

### Additional Links

**Substances** : Vitamin B12: methylcobalamin : CK(55) : AC(9), Vitamin B-12 : CK(780) : AC(104)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

---

## Vitamin C (AC 6) (CK 10)

### A combination of nutrients improves cognitive functioning while decreasing Alzheimer disease neuropathology in an animal model.

**Pubmed Data** : PLoS One. 2010;5(11):e14015. Epub 2010 Nov 17. PMID: [21103342](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Anna Parachikova, Kim N Green, Curt Hendrix, Frank M LaFerla

**Study Type** : Animal Study

#### **Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , B-complex : CK(268) : AC(31) , Curcumin : CK(4128) : AC(2171) , EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Folic Acid : CK(643) : AC(93) , NAC (N-acetyl-L-cysteine) : CK(295) : AC(72) , Piperine : CK(114) : AC(60) , Vitamin C : CK(1953) : AC(401)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

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### Dietary supplementation with resveratrol reduces plaque pathology in a transgenic model of Alzheimer's disease.

**Pubmed Data** : Br J Pharmacol. 2010 Dec 30. Epub 2010 Dec 30. PMID: [19041676](#)

**Article Published Date** : Dec 30, 2010

**Authors** : Saravanan S Karuppagounder, John T Pinto, Hui Xu, Huan-Lian Chen, M Flint Beal, Gary E Gibson

**Study Type** : Transgenic Animal Study

#### **Additional Links**

**Substances** : Resveratrol : CK(1232) : AC(737) , Vitamin C : CK(1953) : AC(401)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Tumor Suppressor Protein p53 Upregulation : CK(293) : AC(202)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

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### Exercise alone was more efficient at improving motor function and reversing ApoE4-associated impairments than antioxidants alone.

**Pubmed Data** : Behav Brain Res. 2016 May 15 ;305:37-45. Epub 2016 Feb 15. PMID: [26892275](#)

**Article Published Date** : May 14, 2016

**Authors** : Kiran Chaudhari, Jessica M Wong, Philip H Vann, Nathalie Sumien

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Vitamin C](#) : CK(1953) : AC(401) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

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## High vitamin C supplementation reduces amyloid plaque deposition, blood brain barrier disruptions and mitochondrial dysfunction in the brains of 5XFAD mice.

**Pubmed Data** : Cell Death Dis. 2014 ;5:e1083. Epub 2014 Feb 27. PMID: [24577081](#)

**Article Published Date** : Dec 31, 2013

**Authors** : S-Y Kook, K-M Lee, Y Kim, M-Y Cha, S Kang, S H Baik, H Lee, R Park, I Mook-Jung

**Study Type** : Animal Study, Transgenic Animal Study

**Additional Links**

**Substances** : [Vitamin C](#) : CK(1953) : AC(401)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Blood-Brain-Barrier Disorders](#) : CK(27) : AC(16)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Oxidized lipoproteins may play a role in neuronal cell death in Alzheimer disease.

**Pubmed Data** : Mol Chem Neuropathol. 1998 Feb;33(2):139-48. PMID: [9565971](#)

**Article Published Date** : Feb 01, 1998

**Authors** : B Draczynska-Lusiak, A Doung, A Y Sun

**Study Type** : Commentary

**Additional Links**

**Substances** : [Vitamin C](#) : CK(1953) : AC(401) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Cholesterol: Oxidation](#) : CK(518) : AC(117)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631) , [Apoptotic](#) : CK(2941) : AC(2062) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Diseases that are Linked](#) : CK(2285) : AC(299)

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## The antioxidants glutathione and ascorbic acid increase the survival of dopaminergic grafts in the rat model of Parkinson's disease

**Pubmed Data** : J Chem Neuroanat. 2004 Dec;28(4):253-64. PMID: [15531136](#)

**Article Published Date** : Dec 01, 2004

**Authors** : A K Agrawal, R K Chaturvedi, S Shukla, K Seth, S Chauhan, A Ahmad, P K Seth

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Glutathione](#) : CK(61) : AC(16) , [Vitamin C](#) : CK(1953) : AC(401)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Vitamin D (AC 11) (CK 105)

**A variety of nutraceutical strategies hold promise in the prevention of Alzheimer disease.**

**Pubmed Data** : Med Hypotheses. 2006;67(4):682-97. Epub 2006 Jul 7. PMID: [16828233](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Mark F McCarty

**Study Type** : Commentary

**Additional Links**

**Substances** : [Chromium](#) : CK(56) : AC(12) , [Cinnamon](#) : CK(243) : AC(88) , [Cocoa](#) : CK(522) : AC(77) , [DHA \(Docosahexaenoic Acid\)](#) : CK(783) : AC(129) , [Fish Oil](#) : CK(701) : AC(111) , [Folic Acid](#) : CK(643) : AC(93) , [Genistein](#) : CK(515) : AC(228) , [Hops](#) : CK(76) : AC(26) , [Policosanols](#) : CK(194) : AC(25) , [Sesame Seeds](#) : CK(235) : AC(71) , [Vitamin D](#) : CK(3113) : AC(441)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

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**Alzheimer's disease cases have lower serum vitamin D concentrations than matched controls.**

**Pubmed Data** : J Alzheimers Dis. 2012 Oct 5. Epub 2012 Oct 5. PMID: [23042216](#)

**Article Published Date** : Oct 04, 2012

**Authors** : Cedric Annweiler, David J Llewellyn, Olivier Beauchet

**Study Type** : Meta Analysis

**Additional Links**

**Substances** : [Vitamin D](#) : CK(3113) : AC(441)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Vitamin D Deficiency](#) : CK(1634) : AC(171)

**Additional Keywords** : [Vitamin D Deficiency](#) : CK(1634) : AC(171)

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## Available data indicates that lower vitamin D status may be associated with increased risk of developing AD and dementia.

**Pubmed Data** : Nutr J. 2015 ;14(1):76. Epub 2015 Aug 1. PMID: [26231781](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Liang Shen, Hong-Fang Ji

**Study Type** : Meta Analysis

**Additional Links**

**Substances** : Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Dementia : CK(571) : AC(79) , Vitamin D Deficiency : CK(1634) : AC(171)

**Additional Keywords** : Vitamin D Deficiency : CK(1634) : AC(171)

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## Extremely high dose vitamin D attenuates a feature of ALS, but not disease outcomes; also toxic to female mice.

**Pubmed Data** : PLoS One. 2013 ;8(2):e30243. Epub 2013 Feb 6. PMID: [23405058](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Alexandro Gianforcaro, Jesse A Solomon, Mazen J Hamadeh

**Study Type** : Animal Study

**Additional Links**

**Substances** : Vitamin D : CK(3113) : AC(441)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Suboptimal vitamin D levels are frequently found in ALS patients (81%).

**Pubmed Data** : J Clin Neurosci. 2013 Nov ;20(11):1550-3. Epub 2013 Jun 29. PMID: [23815870](#)

**Article Published Date** : Oct 31, 2013

**Authors** : Chafic Karam, Matthew J Barrett, Theresa Imperato, Daniel J L MacGowan, Stephen Scelsa

**Study Type** : Human Study

**Additional Links**

**Substances** : Vitamin D : CK(3113) : AC(441)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Vitamin D Deficiency : CK(1634) : AC(171)

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## This reviews the existing knowledge about the link between telomere biology and cellular aging with a focus

## on the role of vitamin D.

**Pubmed Data** : Clin Chem Lab Med. 2015 Mar 21. Epub 2015 Mar 21. PMID: [25803084](#)

**Article Published Date** : Mar 20, 2015

**Authors** : Irene Pusceddu, Christopher-John L Farrell, Angela Maria Di Pierro, Erika Jani, Wolfgang Herrmann, Markus Herrmann

**Study Type** : Review

**Additional Links**

**Substances** : Vitamin D : CK(3113) : AC(441)

**Diseases** : Aging : CK(1591) : AC(429), Cardiovascular Diseases : CK(7018) : AC(887), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Genoprotective : CK(259) : AC(95)

**Additional Keywords** : Telomere Length : CK(18) : AC(5)

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## Vitamin D deficiency might pose a greater risk for ApoEε4 non-carrier Alzheimer's disease patients.

**Pubmed Data** : Neurol Sci. 2016 Jun 29. Epub 2016 Jun 29. PMID: [27357856](#)

**Article Published Date** : Jun 28, 2016

**Authors** : Erdinç Dursun, Merve Alaylıoğlu, Başar Bilgiç, Haşmet Hanağası, Ebba Lohmann, Irem L Atasoy, Esin Candaş, Ömür Selin Araz, Burak Önal, Hakan Gürvit, Selma Yilmazer, Duygu Gezen-Ak

**Study Type** : Human Study

**Additional Links**

**Substances** : Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Vitamin D Deficiency : CK(1634) : AC(171)

**Additional Keywords** : Vitamin D Deficiency : CK(1634) : AC(171)

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## Vitamin D, cognition, and dementia: a systematic review and meta-analysis.

**Pubmed Data** : Neurology. 2012 Sep 25 ;79(13):1397-405. PMID: [23008220](#)

**Article Published Date** : Sep 24, 2012

**Authors** : Cynthia Balion, Lauren E Griffith, Lisa Striffler, Matthew Henderson, Christopher Patterson, George Heckman, David J Llewellyn, Parminder Raina

**Study Type** : Meta Analysis

**Additional Links**

**Substances** : Vitamin D : CK(3113) : AC(441)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Dementia : CK(571) : AC(79), Dementia: Alzheimer Type : CK(23) : AC(3), Vitamin D Deficiency : CK(1634) : AC(171)

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## Vitamin D2 has therapeutic potential against inflammation and Alzheimer's disease.

**Pubmed Data** : Life Sci. 2016 Jul 28. Epub 2016 Jul 28. PMID: [27477351](#)

**Article Published Date** : Jul 27, 2016

**Authors** : Suchismita Raha, Ho Jeong Lee, Silvia Yumnam, Gyeong Eun Hong, Venu Venkatarama Gowda Saralamma, Yeong Lae Ha, Jeong Ok Kim, Young Suk Kim, Jeong Doo Heo, Sang Joon Lee, Hee Kim Eun, Gon Sup Kim

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Vitamin D](#) : CK(3113) : AC(441)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Interleukin-1 beta downregulation](#) : CK(452) : AC(199), [Interleukin-6 Downregulation](#) : CK(1078) : AC(337), [NF-kappaB Inhibitor](#) : CK(1100) : AC(686), [Tumor Necrosis Factor \(TNF\) Alpha Inhibitor](#) : CK(1752) : AC(641)

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## Vitamin D3 and curcuminoids (turmeric) stimulate amyloid-beta clearance by macrophages of Alzheimer's disease patients.

**Pubmed Data** : J Alzheimers Dis. 2009 Jul;17(3):703-17. PMID: [19433889](#)

**Article Published Date** : Jul 01, 2009

**Authors** : Ava Masoumi, Ben Goldenson, Senait Ghirmai, Hripsime Avagyan, Justin Zaghi, Ken Abel, Xueying Zheng, Araceli Espinosa-Jeffrey, Michelle Mahanian, Phillip T Liu, Martin Hewison, Matthew Mizwickie, John Cashman, Milan Fiala

**Study Type** : Human Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171), [Vitamin D](#) : CK(3113) : AC(441)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Additional Keywords** : [Disease Regression](#) : CK(150) : AC(26)

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## Vitamin D3 supplementation may stabilize PD for a short period in patients with FokI TT or CT genotypes without triggering hypercalcemia.

**Pubmed Data** : Am J Clin Nutr. 2013 May ;97(5):1004-13. Epub 2013 Mar 13. PMID: [23485413](#)

**Article Published Date** : Apr 30, 2013

**Authors** : Masahiko Suzuki, Masayuki Yoshioka, Masaya Hashimoto, Maiko Murakami, Miki Noya, Daisuke Takahashi, Mitsuyoshi Urashima

**Study Type** : Human Study

**Additional Links**

**Substances** : [Vitamin D](#) : CK(3113) : AC(441)

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

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## Vitamin E (AC 15) (CK 84)

**A high intake of polyunsaturated fatty acids and vitamin E is associated with a 50-60% decreased risk of developing ALS.**

**Pubmed Data** : J Neurol Neurosurg Psychiatry. 2007 Apr;78(4):367-71. Epub 2006 Apr 28. PMID: [16648143](#)

**Article Published Date** : Apr 01, 2007

**Authors** : J H Veldink, S Kalmijn, G-J Groeneveld, W Wunderink, A Koster, J H M de Vries, J van der Luyt, J H J Wokke, L H Van den Berg

**Study Type** : Human Study

**Additional Links**

**Substances** : Polyunsaturated Fatty Acids (PUFAs) : CK(174) : AC(32) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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**A multi-vitamin/nutrient formula has therapeutic value in early-stage Alzheimer's disease.**

**Pubmed Data** : Am J Alzheimers Dis Other Dement. 2008 Dec-2009 Jan;23(6):571-85. Epub 2008 Dec 1. PMID: [19047474](#)

**Article Published Date** : Dec 01, 2008

**Authors** : Amy Chan, James Paskavitz, Ruth Remington, Shelly Rasmussen, Thomas B Shea

**Study Type** : Human Study

**Additional Links**

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-6 : CK(435) : AC(54), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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**A multi-vitamin/nutrient formula has therapeutic value in moderate-stage to later-stage Alzheimer's disease.**

**Pubmed Data** : Am J Alzheimers Dis Other Dement. 2009 Feb-Mar;24(1):27-33. Epub 2008 Dec 3. PMID: [19056706](#)

**Article Published Date** : Feb 01, 2009

**Authors** : Ruth Remington, Amy Chan, James Paskavitz, Thomas B Shea

**Study Type** : Human Study

**Additional Links**

**Substances** : Carnitine, Acetyl-L- : CK(40) : AC(4) , Folic Acid : CK(643) : AC(93), NAC (N-acetyl-L-

cysteine) : CK(295) : AC(72), SAMe (S-adenosylmethionine) : CK(113) : AC(20) , Vitamin B-12 : CK(770) : AC(103), Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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## Exercise alone was more efficient at improving motor function and reversing ApoE4-associated impairments than antioxidants alone.

**Pubmed Data** : Behav Brain Res. 2016 May 15 ;305:37-45. Epub 2016 Feb 15. PMID: [26892275](#)

**Article Published Date** : May 14, 2016

**Authors** : Kiran Chaudhari, Jessica M Wong, Philip H Vann, Nathalie Sumien

**Study Type** : Animal Study

**Additional Links**

**Substances** : Vitamin C : CK(1953) : AC(401) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

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## Long-term treatment with a nutraceutical containing rice bran extract could be useful for slowing down brain aging.

**Pubmed Data** : Neuromolecular Med. 2016 Jun 27. Epub 2016 Jun 27. PMID: [27350374](#)

**Article Published Date** : Jun 26, 2016

**Authors** : Stephanie Hagl, Heike Asseburg, Martina Heinrich, Nadine Sus, Eva-Maria Blumrich, Ralf Dringen, Jan Frank, Gunter P Eckert

**Study Type** : Animal Study

**Additional Links**

**Substances** : Rice Bran : CK(127) : AC(37) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Aging: Brain : CK(246) : AC(84), Alzheimer's Disease : CK(1282) : AC(375) , Mitochondrial Dysfunction : CK(224) : AC(90), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419) , Risk Reduction : CK(6136) : AC(658)

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## Nutritional interventions may be therapeutic in the treatment of amyotrophic lateral sclerosis.

**Pubmed Data** : Clin Nutr. 2009 Dec;28(6):604-17. Epub 2009 Sep 25. PMID: [19782443](#)

**Article Published Date** : Dec 01, 2009

**Authors** : Barkha P Patel, Mazen J Hamadeh

**Study Type** : Commentary

**Additional Links**

**Substances** : Alpha-Lipoic Acid : CK(462) : AC(106) , Carnitine : CK(434) : AC(66) , Coenzyme Q10 : CK(941) : AC(140), EGCG (Epigallocatechin gallate) : CK(606) : AC(312) , Folic Acid : CK(643) : AC(93), Ginkgo biloba : CK(796) : AC(161) , Melatonin : CK(946) : AC(304) , Red Wine Extract : CK(114) : AC(32), Vitamin E : CK(1656) : AC(290)  
**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Oxidized lipoproteins may play a role in neuronal cell death in Alzheimer disease.

**Pubmed Data** : Mol Chem Neuropathol. 1998 Feb;33(2):139-48. PMID: [9565971](#)

**Article Published Date** : Feb 01, 1998

**Authors** : B Draczynska-Lusiak, A Doung, A Y Sun

**Study Type** : Commentary

**Additional Links**

**Substances** : Vitamin C : CK(1953) : AC(401) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cholesterol: Oxidation : CK(518) : AC(117)

**Pharmacological Actions** : Antioxidants : CK(7192) : AC(2631) , Apoptotic : CK(2941) : AC(2062) , Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Diseases that are Linked : CK(2285) : AC(299)

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## Rice bran extract is a promising candidate nutraceutical for the prevention of age-related neurodegenerative diseases.

**Pubmed Data** : Nutr Neurosci. 2015 Aug 4. Epub 2015 Aug 4. PMID: [26241203](#)

**Article Published Date** : Aug 03, 2015

**Authors** : Stephanie Hagl, Dirk Berressem, Rehka Grewal, Nadine Grebenstein, Jan Frank, Gunter P Eckert

**Study Type** : Animal Study

**Additional Links**

**Substances** : Rice Bran : CK(127) : AC(37) , Vitamin E : CK(1656) : AC(290)

**Diseases** : Mitochondrial Dysfunction : CK(224) : AC(90), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

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## Serum vitamin E levels have a protective effect on ALS risk.

**Pubmed Data** : Amyotroph Lateral Scler Frontotemporal Degener. 2013 May ;14(4):246-51. Epub 2013 Jan 4. PMID: [23286756](#)

**Article Published Date** : Apr 30, 2013

**Authors** : D Michal Freedman, Ralph W Kuncel, Stephanie J Weinstein, Nea Malila, Jarmo Virtamo,

Demetrius Albanes

**Study Type** : Human Study

**Additional Links**

**Substances** : [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## The oral administration of delta tocotrienol may be useful in the treatment of Parkinson's disease patients.

**Pubmed Data** : Neurosci Lett. 2015 Oct 30. Epub 2015 Oct 30. PMID: [26523792](#)

**Article Published Date** : Oct 29, 2015

**Authors** : Kazuhiro Nakaso, Yosuke Horikoshi, Toru Takahashi, Takehiko Hanaki, Masato Nakasone, Yoshinori Kitagawa, Taisuke Koike, Tatsuya Matura

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Tocotrienol: Delta](#) : CK(42) : AC(22) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Problem Substances** : [Tamoxifen](#) : CK(338) : AC(51)

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## The progression of ALS is associated with oxygen radical-induced lipid peroxidative damage, indicating that antioxidant therapy may be useful.

**Pubmed Data** : J Neurosci Res. 1998 Jul 1;53(1):66-77. PMID: [9670993](#)

**Article Published Date** : Jul 01, 1998

**Authors** : E D Hall, P K Andrus, J A Oostveen, T J Fleck, M E Gurney

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Antioxidant formulas](#) : CK(492) : AC(76) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Lipid Peroxidation](#) : CK(692) : AC(252) , [Oxidative Stress](#) : CK(3800) : AC(1357)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630)

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## Vitamin E intake decreases the risk of amyotrophic lateral sclerosis: a pooled analysis of data from 5 prospective cohort studies..

**Pubmed Data** : Am J Epidemiol. 2011 Mar 15 ;173(6):595-602. Epub 2011 Feb 18. PMID: [21335424](#)

**Article Published Date** : Mar 14, 2011

**Authors** : Hao Wang, Éilis J O'Reilly, Marc G Weisskopf, Giancarlo Logroscino, Marjorie L McCullough, Arthur Schatzkin, Laurence N Kolonel, Alberto Ascherio

**Study Type :** Human Study

**Additional Links**

**Substances :** [Vitamin E](#) : CK(1656) : AC(290)

**Diseases :** [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Pharmacological Actions :** [Antioxidants](#) : CK(7192) : AC(2631)

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## Vitamin E supplementation may contribute to preventing amyotrophic lateral sclerosis.

**Pubmed Data :** Ann Neurol. 2005 Jan;57(1):104-10. PMID: [15529299](#)

**Article Published Date :** Jan 01, 2005

**Authors :** Alberto Ascherio, Marc G Weisskopf, Eilis J O'reilly, Eric J Jacobs, Marjorie L McCullough, Eugenia E Calle, Merit Cudkowicz, Michael J Thun

**Study Type :** Human Study

**Additional Links**

**Substances :** [Vitamin E](#) : CK(1656) : AC(290)

**Diseases :** [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## Vitamin E use is associated with improved survival in an Alzheimer's disease cohort.

**Pubmed Data :** Dement Geriatr Cogn Disord. 2009;28(6):536-40. Epub 2009 Dec 10. PMID: [20016184](#)

**Article Published Date :** Jan 01, 2009

**Authors :** Valory N Pavlik, Rachelle S Doody, Susan D Rountree, Eveleen J Darby

**Study Type :** Human Study

**Additional Links**

**Substances :** [Vitamin E](#) : CK(1656) : AC(290)

**Diseases :** [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## Vitamin E, acetyl-L-carnitine and $\alpha$ -lipoic acid are superior to the drug donepezil (Aricept) at normalizing biomarkers associated with Alzheimer's disease in an animal model.

**Pubmed Data :** Exp Toxicol Pathol. 2010 Dec 23. Epub 2010 Dec 23. PMID: [21183322](#)

**Article Published Date :** Dec 23, 2010

**Authors :** Hanaa H Ahmed

**Study Type :** Animal Study

**Additional Links**

**Substances :** [Acetyl-L-carnitine](#) : CK(211) : AC(36), [Alpha-Lipoic Acid](#) : CK(462) : AC(106), [Vitamin E](#) : CK(1656) : AC(290)

**Diseases :** [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Additional Keywords :** [Superiority of Natural Substances versus Drugs](#) : CK(1304) : AC(249)

## Walnut (AC 4) (CK 7)

### A review of walnut polyphenols in health maintenance and disease prevention.

**Pubmed Data** : Crit Rev Food Sci Nutr. 2015 Dec 29;0. Epub 2015 Dec 29. PMID: [26713565](#)

**Article Published Date** : Dec 28, 2015

**Authors** : Claudia Sánchez-González, Maria Izquierdo-Pulido

**Study Type** : Review

#### Additional Links

**Substances** : Polyphenols : CK(920) : AC(333) , Walnut : CK(187) : AC(43)

**Diseases** : Cancers: All : CK(14297) : AC(4542) , Cardiovascular Diseases : CK(7018) : AC(887) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Anti-Inflammatory Agents : CK(4499) : AC(1573) , Antioxidants : CK(7191) : AC(2630)

### A walnut extract has neuroprotective effects and may have potential for the prevention or treatment of Parkinson's disease.

**Pubmed Data** : Int J Mol Sci. 2016 ;17(1). Epub 2016 Jan 15. PMID: [26784178](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Jin Gyu Choi, Gunhyuk Park, Hyo Geun Kim, Dal-Seok Oh, Hocheol Kim, Myung Sook Oh

**Study Type** : Animal Study, In Vitro Study

#### Additional Links

**Substances** : Walnut : CK(187) : AC(43)

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Plant Extracts : CK(7288) : AC(2419)

### Dietary supplementation of walnut attenuated MPTP-induced impairment in a mouse model of Parkinson's disease.

**Pubmed Data** : Neurochem Res. 2015 May 6. Epub 2015 May 6. PMID: [25944473](#)

**Article Published Date** : May 05, 2015

**Authors** : Musthafa Mohamed Essa, Selvaraju Subash, Chinnasamy Dhanalakshmi, Thamilarasan Manivasagam, Samir Al-Adawi, Gilles J Guillemin, Arokiasamy Justin Thenmozhi

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Walnut](#) : CK(187) : AC(43)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3800) : AC(1357), [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Antiparkinson Agents](#) : CK(2) : AC(1), [Enzyme Activators](#) : CK(4) : AC(2), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Dietary Modification](#) : CK(315) : AC(47)

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## Walnut peptides may have a protective effect on Alzheimer's disease by reducing inflammatory responses and modulating antioxidant system.

**Pubmed Data** : J Huazhong Univ Sci Technolog Med Sci. 2016 Feb ;36(1):21-30. Epub 2016 Feb 3. PMID: [26838735](#)

**Article Published Date** : Jan 31, 2016

**Authors** : Juan Zou, Pei-Shan Cai, Chao-Mei Xiong, Jin-Lan Ruan

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Walnut](#) : CK(187) : AC(43)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Brain Inflammation](#) : CK(246) : AC(140), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Memory Disorders](#) : CK(340) : AC(103)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Antioxidants](#) : CK(7191) : AC(2630), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [NF-kappaB Inhibitor](#) : CK(1100) : AC(686)

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## Wen Pi Tang (AC 1) (CK 2)

### The Chinese Herbal Formula: Wen-Pi-Tang delays the onset and progression of ALS.

**Pubmed Data** : Biol Pharm Bull. 2009 Mar;32(3):382-8. PMID: [19252282](#)

**Article Published Date** : Mar 01, 2009

**Authors** : Michiko Sekiya, Takashi Ichianagi, Yasumasa Ikeshiro, Takako Yokozawa

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Wen Pi Tang](#) : CK(2) : AC(1)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

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## Whey (AC 1) (CK 10)

### Whey protein improves the condition of patients with amyotrophic lateral sclerosis.

**Pubmed Data** : Arq Neuropsiquiatr. 2010 Apr;68(2):263-8. PMID: [20464297](#)

**Article Published Date** : Apr 01, 2010

**Authors** : Luciano Bruno de Carvalho Silva, Lucia Figueiredo Mourão, Ariovaldo Armando Silva, Núbia Maria Freire Vieira Lima, Sara Regina Almeida, Marcondes C Franca Jr, Anamarli Nucci, Jaime Amaya-Farfán

**Study Type** : Human Study

**Additional Links**

**Substances** : [Whey](#) : CK(348) : AC(75)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

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## Wine (AC 2) (CK 3)

### Moderate consumption of Cabernet Sauvignon attenuates Abeta neuropathology in a mouse model of Alzheimer's disease.

**Pubmed Data** : FASEB J. 2006 Nov;20(13):2313-20. PMID: [17077308](#)

**Article Published Date** : Nov 01, 2006

**Authors** : Jun Wang, Lap Ho, Zhong Zhao, Ilana Seror, Nelson Humala, Dara L Dickstein, Meenakshisundaram Thiagarajan, Susan S Percival, Stephen T Talcott, Giulio Maria Pasinetti

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Flavonoids](#) : CK(1194) : AC(376), [Polyphenols](#) : CK(920) : AC(333), [Wine](#) : CK(197) : AC(44)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

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## Resveratrol's therapeutic properties in neurodegenerative conditions may be due to its gene protective and regulatory as well as antioxidant properties.

**Pubmed Data** : Neuropharmacology. 2008 Jun;54(7):1112-9. Epub 2008 Mar 16. PMID: [15956815](#)

**Article Published Date** : Jun 01, 2008

**Authors** : Sylvain Doré

**Study Type** : Review

### Additional Links

**Substances** : Flavonoids : CK(1194) : AC(376), Polyphenols : CK(920) : AC(333), Red Wine Extract : CK(114) : AC(32), Resveratrol : CK(1232) : AC(737), Wine : CK(197) : AC(44)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Brain Inflammation : CK(246) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Antioxidants : CK(7191) : AC(2630), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Stilbenes : CK(402) : AC(242)

## Xanthohumol (AC 1) (CK 1)

### Xanthohumol might be a potential candidate for the prevention of neurodegenerative disorders.

**Pubmed Data** : J Agric Food Chem. 2015 Feb 11 ;63(5):1521-31. Epub 2015 Jan 28. PMID: [25587858](#)

**Article Published Date** : Feb 10, 2015

**Authors** : Juan Yao, Baoxin Zhang, Chunpo Ge, Shoujiao Peng, Jianguo Fang

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Xanthohumol : CK(1) : AC(1)

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Pharmacological Actions** : Neuroprotective Agents : CK(2235) : AC(1052), Nrf2 activation : CK(172) : AC(83)

## Zinc (AC 2) (CK 11)

**Curcumin's higher binding affinity for iron and copper rather than zinc may contribute to its protective effect in Alzheimer's disease.**

**Pubmed Data** : J Alzheimers Dis. 2004 Aug;6(4):367-77; discussion 443-9. PMID: [15345806](#)

**Article Published Date** : Aug 01, 2004

**Authors** : Larry Baum, Alex Ng

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171), Zinc : CK(941) : AC(139)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

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**Selenium, glutathione, copper/zinc and superoxide dismutase may have therapeutic value in ALS.**

**Pubmed Data** : Scand J Rheumatol. 1995;24(2):85-93. PMID: [9726810](#)

**Article Published Date** : Jan 01, 1995

**Authors** : S Apostolski, Z Marinković, A Nikolić, D Blagojević, M B Spasić, A M Michelson

**Study Type** : Human Study

**Additional Links**

**Substances** : Antioxidant formulas : CK(492) : AC(76), Copper : CK(83) : AC(17), Glutathione : CK(61) : AC(16), Selenium : CK(784) : AC(139), Superoxide dismutase : CK(16) : AC(5), Zinc : CK(941) : AC(139)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Calcium Channel Blockers : CK(87) : AC(23)

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## beta-Carotene (AC 1) (CK 1)

**Vitamin A and beta-carotene have anti-Alzheimer potential.**

**Pubmed Data** : J Alzheimers Dis. 2011 Aug 2. Epub 2011 Aug 2. PMID: [21811022](#)

**Article Published Date** : Aug 02, 2011

**Authors** : Junichi Takasaki, Kenjiro Ono, Yuji Yoshiike, Mie Hirohata, Tokuhei Ikeda, Akiyoshi

Morinaga, Akihiko Takashima, Masahito Yamada

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [beta-Carotene](#) : CK(318) : AC(53) , [Vitamin A](#) : CK(498) : AC(77)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## phytoestrogens (AC 1) (CK 2)

**Genistein is neuroprotective in murine models of familial amyotrophic lateral sclerosis and stroke.**

**Pubmed Data** : Biochem Biophys Res Commun. 1999 May 19;258(3):685-8. PMID: [10329446](#)

**Article Published Date** : May 19, 1999

**Authors** : V N Trieu, F M Uckun

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Genistein](#) : CK(515) : AC(228) , [phytoestrogens](#) : CK(777) : AC(263)

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Stroke](#) : CK(1322) : AC(163) , [Stroke: Attenuation/Recovery](#) : CK(345) : AC(74)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

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## Category : Problem Substances

## Acetaminophen (AC 1) (CK 1)

**Curcumin is a potential therapy for diseases where the deleterious effects of oxidative stress are due to aberrant Ca<sup>2+</sup> entry mediated by TRPM2 channels.**

**Pubmed Data** : Redox Biol. 2015 Nov 10 ;7:1-7. Epub 2015 Nov 10. PMID: [26609559](#)

**Article Published Date** : Nov 09, 2015

**Authors** : E Kheradpezhoun, G J Barritt, G Y Rychkov

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Liver Damage](#) : CK(867) : AC(324), [Liver Damage: Drug-Induced](#) : CK(91) : AC(25) ,  
[Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Oxidative Stress](#) : CK(3799) : AC(1356)

**Pharmacological Actions** : [Hepatoprotective](#) : CK(1342) : AC(581), [Transient Receptor Potential Melastatin 2 Inhibition](#) : CK(1) : AC(1)

**Problem Substances** : [Acetaminophen](#) : CK(83) : AC(29), [Paracetamol](#) : CK(119) : AC(35)

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## Agricultural Chemicals (AC 1) (CK 10)

**Occupational exposures to agricultural chemicals is associated with increased risk for ALS.**

**Pubmed Data** : Am J Epidemiol. 1997 Jun 15;145(12):1076-88. PMID: [9199537](#)

**Article Published Date** : Jun 15, 1997

**Authors** : V McGuire, W T Longstreth, L M Nelson, T D Koepsell, H Checkoway, M S Morgan, G van Belle

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Problem Substances** : [Agricultural Chemicals](#) : CK(10) : AC(1), [Pesticides](#) : CK(827) : AC(95)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Aluminium Cans (AC 1) (CK 1)

**Aluminium beverage cans contribute significant amounts of aluminium, particularly in beverages with decreasing ph such as soft drinks**

**Pubmed Data** : Med J Aust. 1992 May 4;156(9):604-5. PMID: [1625612](#)

**Article Published Date** : May 04, 1992

**Authors** : J M Duggan, J E Dickeson, P F Tynan, A Houghton, J E Flynn

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Problem Substances** : [Aluminium Cans](#) : CK(7) : AC(5), [Sugary soda](#) : CK(209) : AC(26)

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## Aluminum (AC 9) (CK 13)

**Alpha synuclein protein is involved in Aluminum-induced cell death and oxidative stress in PC12 cells.**

**Pubmed Data** : Brain Res. 2016 Jan 27. Epub 2016 Jan 27. PMID: [26826584](#)

**Article Published Date** : Jan 26, 2016

**Authors** : Jamileh Saberzadeh, Rita Arabsolghar, Mohammad Ali Takhshid

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Aluminum Toxicity](#) : CK(195) : AC(75), [Parkinson's Disease](#) : CK(526) : AC(164)

**Problem Substances** : [Aluminum](#) : CK(274) : AC(78)

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**Aluminium may play an active role in the pathogenesis of critical neuropathologic lesion in Alzheimer's disease and other related disorders.**

**Pubmed Data** : J Alzheimers Dis. 2006 ;9(3 Suppl):291-300. PMID: [17004365](#)

**Article Published Date** : Jan 01, 2006

**Authors** : Daniel P Perl, Sharon Moalem

**Study Type** : Review

**Additional Links**

**Diseases** : [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Problem Substances** : [Aluminum](#) : CK(274) : AC(78)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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**Aluminium, fluoride and a combination of aluminium-fluoride treatments caused an increase in brain lipid**

## peroxidation products and reactive oxygen species formation.

**Pubmed Data** : Pathophysiology. 2015 Mar ;22(1):39-48. Epub 2014 Dec 13. PMID: [25577494](#)

**Article Published Date** : Feb 28, 2015

**Authors** : Ibukun Dorcas Akinrinade, Adejoke Elizabeth Memudu, Olalekan Michael Ogundele, Olanrewaju Ibrahim Ajetunmobi

**Study Type** : Animal Study

### Additional Links

**Diseases** : Aluminum Toxicity : CK(195) : AC(75), Brain Inflammation : CK(246) : AC(140), Fluoride Toxicity : CK(186) : AC(62), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Additional Keywords** : Increased Risk : CK(1375) : AC(171), Increased Risk : CK(1375) : AC(171)

**Problem Substances** : Aluminum : CK(274) : AC(78), Fluoride : CK(398) : AC(83), Sodium Fluoride : CK(190) : AC(62)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Aluminum potentially enhanced apoptotic proteins and inflammatory markers in neuronal cells.

**Pubmed Data** : Biol Trace Elem Res. 2015 Nov 7. Epub 2015 Nov 7. PMID: [26546554](#)

**Article Published Date** : Nov 06, 2015

**Authors** : Syed Husain Mustafa Rizvi, Arshiya Parveen, Israr Ahmad, Iqbal Ahmad, Anoop K Verma, Md Arshad, Abbas Ali Mahdi

**Study Type** : In Vitro Study

### Additional Links

**Diseases** : Neurodegenerative Diseases : CK(3376) : AC(850)

**Problem Substances** : Aluminum : CK(274) : AC(78)

**Adverse Pharmacological Actions** : Inflammatory : CK(234) : AC(66), Neurotoxic : CK(1239) : AC(224)

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## Dementia in patients undergoing long-term dialysis: aetiology, differential diagnoses, epidemiology and management.

**Pubmed Data** : CNS Drugs. 2001 ;15(9):691-9. PMID: [11580308](#)

**Article Published Date** : Dec 31, 2000

**Authors** : P M Rob, C Niederstadt, E Reusche

**Study Type** : Commentary

### Additional Links

**Diseases** : Dementia : CK(571) : AC(79)

**Problem Substances** : Aluminum : CK(274) : AC(78)

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## Excessive fluoride and aluminium intake induces the progression of cell death which inhibit AChE activities and trigger the release of lysosomal and cell cycle proteins.

**Pubmed Data** : Pathophysiology. 2015 Jun ;22(2):105-15. Epub 2015 Apr 2. PMID: [25863844](#)

**Article Published Date** : May 31, 2015

**Authors** : Ibukun Dorcas Akinrinade, Adejoke Elizabeth Memudu, Olalekan Michael Ogundele

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Additional Keywords** : [Increased Risk](#) : CK(1385) : AC(172)

**Problem Substances** : [Aluminum](#) : CK(274) : AC(78) , [Fluoride](#) : CK(398) : AC(83) , [Sodium Fluoride](#) : CK(190) : AC(62)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Hesperidin could be a potential therapeutic agent in the treatment of oxidative stress associated neurodegenerative diseases.

**Pubmed Data** : Nutr Neurosci. 2016 Feb 15. Epub 2016 Feb 15. PMID: [26878879](#)

**Article Published Date** : Feb 14, 2016

**Authors** : Arokiasamy Justin Thenmozhi, Tharsius Raja William Raja, Thamilarasan Manivasagam, Udaiyappan Janakiraman, Musthafa Mohamed Essa

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Hesperidin](#) : CK(196) : AC(53)

**Diseases** : [Aluminum Toxicity](#) : CK(195) : AC(75) , [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Brain: Oxidative Stress](#) : CK(75) : AC(44) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Pharmacological Actions** : [Anti-Apoptotic](#) : CK(360) : AC(201) , [Antioxidants](#) : CK(7192) : AC(2631) , [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Problem Substances** : [Aluminum](#) : CK(274) : AC(78)

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## Low levels of aluminum can lead to behavioral and morphological changes associated with Alzheimer's disease and age-related neurodegeneration.

**Pubmed Data** : Neurotoxicology. 2015 Dec 11. Epub 2015 Dec 11. PMID: [26687397](#)

**Article Published Date** : Dec 10, 2015

**Authors** : Stephen C Bondy, S C Bondy

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Brain Inflammation](#) : CK(246) : AC(140),

Neurodegenerative Diseases : CK(3370) : AC(846)

**Problem Substances** : Aluminum : CK(274) : AC(78)

**Adverse Pharmacological Actions** : Inflammatory : CK(234) : AC(66)

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## Treatment with quercetin may represent a therapeutic strategy to attenuate the neuronal death against aluminum-induced neurodegeneration.

**Pubmed Data** : Neuroscience. 2016 Mar 2. Epub 2016 Mar 2. PMID: [26944603](#)

**Article Published Date** : Mar 01, 2016

**Authors** : D R Sharma, W Y Wani, A Sunkaria, R J Kandimalla, R K Sharma, D Verma, A Bal, K D Gill

**Study Type** : Animal Study

**Additional Links**

**Substances** : Quercetin : CK(557) : AC(246)

**Diseases** : Aluminum Toxicity : CK(195) : AC(75), Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Problem Substances** : Aluminum : CK(274) : AC(78)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Aluminum Chloride (AC 3) (CK 6)

### Fisetin may slow or prevent neurodegeneration and can be utilised as neuroprotective agent against Alzheimer's and Parkinson's disease.

**Pubmed Data** : J Nutr Biochem. 2015 Aug 8. Epub 2015 Aug 8. PMID: [26411262](#)

**Article Published Date** : Aug 07, 2015

**Authors** : Dharmalingam Prakash, Ganapasam Sudhandiran

**Study Type** : Animal Study

**Additional Links**

**Substances** : Fisetin : CK(20) : AC(18)

**Diseases** : Aluminum Toxicity : CK(195) : AC(75), Alzheimer's Disease : CK(1282) : AC(375), Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Neuroprotective Agents : CK(2237) : AC(1053)

**Problem Substances** : Aluminum Chloride : CK(29) : AC(12)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Piper nigrum significantly improved learning and memory deficits associated with aluminium chloride and also showed the anticholinesterase activity with prevention of nerve degeneration.

**Pubmed Data** : J Clin Diagn Res. 2015 Apr ;9(4):FF01-4. Epub 2015 Apr 1. PMID: [26023568](#)

**Article Published Date** : Mar 31, 2015

**Authors** : Lokraj Subedee, R N Suresh, Jayanthi Mk, Kalabharathi HI, Satish Am, Pushpa Vh

**Study Type** : Animal Study

### Additional Links

**Substances** : [Black Pepper](#) : CK(229) : AC(96)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Acetylcholinesterase Inhibitor](#) : CK(36) : AC(18) , [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Additional Keywords** : [Neuroprotective Agents](#) : CK(2235) : AC(1052)

**Problem Substances** : [Aluminum Chloride](#) : CK(29) : AC(12)

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## Tannoid principles of E. officinalis may be a promising therapy in ameliorating neurotoxicity of aluminum.

**Pubmed Data** : Nutr Neurosci. 2015 Apr 4. Epub 2015 Apr 4. PMID: [25842984](#)

**Article Published Date** : Apr 03, 2015

**Authors** : Arokiasamy Justin Thenmozhi, Mathiyazahan Dhivyabharathi, Tharsius Raja William Raja, Thamilarasan Manivasagam, Musthafa Mohamed Essa

**Study Type** : Animal Study

### Additional Links

**Substances** : [Amla Fruit](#) : CK(80) : AC(33)

**Diseases** : [Aluminum Toxicity](#) : CK(195) : AC(75), [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

**Problem Substances** : [Aluminum Chloride](#) : CK(29) : AC(12)

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## Aluminum oxide (AC 1) (CK 2)

**Nano-alumina particles induced Alzheimer disease neuropathology by enhancing the amyloidogenic pathway**

## of amyloid beta production and aggregation.

**Pubmed Data** : Nanoscale. 2015 Sep 21 ;7(37):15225-37. PMID: [26315713](#)

**Article Published Date** : Sep 20, 2015

**Authors** : Shahid Ali Shah, Gwang Ho Yoon, Ashfaq Ahmad, Faheem Ullah, Faiz Ul Amin, Myeong Ok Kim

**Study Type** : Animal Study, In Vitro Study

### Additional Links

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Brain: Oxidative Stress](#) : CK(75) : AC(44) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Additional Keywords** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Problem Substances** : [Aluminum oxide](#) : CK(4) : AC(2)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

## Arsenite (AC 1) (CK 2)

**Ginkgo biloba and red clover in combination was more effective as protective agents compared to each one of them alone.**

**Pubmed Data** : Food Chem Toxicol. 2016 Aug ;94:112-27. Epub 2016 May 24. PMID: [27234133](#)

**Article Published Date** : Jul 31, 2016

**Authors** : Heba M Abdou, Mokhtar I Yousef, Desouki A El Mekkawy, Ahmed S Al-Shami

**Study Type** : Animal Study

### Additional Links

**Substances** : [Ginkgo biloba](#) : CK(796) : AC(161) , [Red Clover](#) : CK(40) : AC(11)

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053) , [Prophylactic Agents](#) : CK(129) : AC(31)

**Additional Keywords** : [Natural Substance Synergy](#) : CK(534) : AC(244)

**Problem Substances** : [Arsenite](#) : CK(9) : AC(6)

## Atorvastatin (AC 2) (CK 3)

## Cognitive impairment associated with statin drug use has been reported.

**Pubmed Data** : Pharmacotherapy. 2003 Dec ;23(12):1663-7. PMID: [14695047](#)

**Article Published Date** : Dec 01, 2003

**Authors** : Deborah S King, Amanda J Wilburn, Marion R Wofford, T Kristopher Harrell, Brent J Lindley, Daniel W Jones

**Study Type** : Review

**Additional Links**

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79), Memory Disorders : CK(340) : AC(103)

**Problem Substances** : Atorvastatin : CK(516) : AC(99), Cholesterol Lowering Drugs : CK(2451) : AC(391), Simvastatin : CK(752) : AC(152), Statin Drugs : CK(4163) : AC(498)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Statin drugs exhibit neurotoxicity in an animal neuronal cell line.

**Pubmed Data** : Eur Rev Med Pharmacol Sci. 2011 Sep ;15(9):985-91. PMID: [22013720](#)

**Article Published Date** : Sep 01, 2011

**Authors** : K Vural, M I Tuğlu

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Brain Damage : CK(93) : AC(44), Neurodegenerative Diseases : CK(3370) : AC(846), Statin-Induced Pathologies : CK(1636) : AC(326)

**Pharmacological Actions** : Antiproliferative : CK(2461) : AC(1673)

**Problem Substances** : Atorvastatin : CK(516) : AC(99), Lovastatin : CK(267) : AC(68), Statin Drugs : CK(4163) : AC(498)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Cadmium (AC 1) (CK 1)

### Resveratrol may serve as a potential therapeutic agent in the prevention of cadmium induced neurodegenerative diseases.

**Pubmed Data** : J Neurochem. 2015 Jul 4. Epub 2015 Jul 4. PMID: [26146868](#)

**Article Published Date** : Jul 03, 2015

**Authors** : Chunxiao Liu, Ruijie Zhang, Chenxia Sun, Hai Zhang, Chong Xu, Wen Liu, Wei Gao, Shile Huang, Long Chen

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Resveratrol](#) : CK(1232) : AC(737)

**Diseases** : [Cadmium Poisoning](#) : CK(129) : AC(61), [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Problem Substances** : [Cadmium](#) : CK(41) : AC(4)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Cell Phone Exposure (AC 1) (CK 2)

**900 MHz radiation emitted from mobile/cellular phones can be an agent to alter some biomolecules such as brain protein.**

**Pubmed Data** : Electromagn Biol Med. 2012 Jan 23. Epub 2012 Jan 23. PMID: [22268730](#)

**Article Published Date** : Jan 23, 2012

**Authors** : Suleyman Dasdag, Mehmet Zulkuf Akdag, Goksel Kizil, Murat Kizil, Dilek Ulker Cakir, Beran Yokus

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Cell Phone Induced Disease](#) : CK(16) : AC(4) , [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Additional Keywords** : [Undefined](#) : CK(14) : AC(3)

**Anti Therapeutic Actions** : [Electromagnetic Fields](#) : CK(164) : AC(25)

**Problem Substances** : [Cell Phone Exposure](#) : CK(19) : AC(4)

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## Cholesterol Lowering Drugs (AC 1) (CK 1)

## Cognitive impairment associated with statin drug use has been reported.

**Pubmed Data** : Pharmacotherapy. 2003 Dec ;23(12):1663-7. PMID: [14695047](#)

**Article Published Date** : Dec 01, 2003

**Authors** : Deborah S King, Amanda J Wilburn, Marion R Wofford, T Kristopher Harrell, Brent J Lindley, Daniel W Jones

**Study Type** : Review

### Additional Links

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79), Memory Disorders : CK(340) : AC(103)

**Problem Substances** : Atorvastatin : CK(516) : AC(99), Cholesterol Lowering Drugs : CK(2451) : AC(391), Simvastatin : CK(752) : AC(152), Statin Drugs : CK(4163) : AC(498)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Cholinesterase Inhibitor Drugs (AC 3) (CK 24)

### Cholinesterase inhibitor drug use is associated with increased incidence of bradycardia.

**Pubmed Data** : J Am Geriatr Soc. 2009 Nov;57(11):1997-2003. Epub 2009 Sep 28. PMID: [19793162](#)

**Article Published Date** : Nov 01, 2009

**Authors** : Rohini K Hernandez, Wildon Farwell, Michael D Cantor, Elizabeth V Lawler

**Study Type** : Meta Analysis

### Additional Links

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Bradycardia : CK(44) : AC(6), Dementia : CK(571) : AC(79)

**Problem Substances** : Cholinesterase Inhibitor Drugs : CK(135) : AC(9), Donepezil (trade name Aricept) : CK(89) : AC(8)

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### The cholinesterase inhibitor drugs may increase tremor and exacerbation of Parkinson's disease.

**Pubmed Data** : Prescrire Int. 2007 Oct;16(91):197-8. PMID: [17926835](#)

**Article Published Date** : Oct 01, 2007

**Authors** : [No authors listed]

**Study Type** : Review

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Dementia : CK(571) : AC(79) , Parkinson's Disease : CK(525) : AC(163) , Parkinsonism : CK(12) : AC(8) , Tremor : CK(39) : AC(8)

**Problem Substances** : Cholinesterase Inhibitor Drugs : CK(135) : AC(9) , Donepezil (trade name Aricept) : CK(89) : AC(8) , Galantamine : CK(1) : AC(1) , Rivastigmine : CK(21) : AC(2)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Two cases of suicide in patients with a diagnosis of probable Alzheimer disease and who were treated with cholinesterase inhibitor drugs have been reported.

**Pubmed Data** : Alzheimer Dis Assoc Disord. 1999 Apr-Jun;13(2):88-90. PMID: [10372951](#)

**Article Published Date** : Apr 01, 1999

**Authors** : S H Ferris, G T Hofeldt, G Carbone, P Masciandaro, W M Troetel, B P Imbimbo

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Problem Substances** : Cholinesterase Inhibitor Drugs : CK(135) : AC(9) , Eptastigmine : CK(3) : AC(1)

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## Cow Milk (AC 1) (CK 1)

### "Milk--the promoter of chronic Western diseases."

**Pubmed Data** : Med Hypotheses. 2009 Jun ;72(6):631-9. Epub 2009 Feb 15. PMID: [19232475](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Bodo C Melnik

**Study Type** : Commentary

**Additional Links**

**Diseases** : Acne : CK(327) : AC(53) , Allergy: Cow's Milk : CK(132) : AC(20) , Atherosclerosis : CK(578) : AC(146) , Casein Intolerance : CK(44) : AC(5) , Diabetes Mellitus: Type 1 : CK(1074) : AC(283) , Hyperinsulinism : CK(251) : AC(56) , Insulin-like Growth Factor (IGF): Elevated : CK(33) : AC(6) , Neurodegenerative Diseases : CK(3370) : AC(846) , Obesity : CK(2163) : AC(456)

**Problem Substances** : Cow Milk : CK(453) : AC(56)

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# Dimethoate (AC 1) (CK 1)

## "Effect of pesticides on cell survival in liver and brain rat tissues."

**Pubmed Data** : Ecotoxicol Environ Saf. 2009 Oct ;72(7):2025-32. Epub 2009 Jun 2. PMID: [19493570](#)

**Article Published Date** : Oct 01, 2009

**Authors** : Mariana Astiz, María J T de Alaniz, Carlos Alberto Marra

**Study Type** : In Vitro Study

### Additional Links

**Diseases** : Chemically-Induced Liver Damage : CK(629) : AC(252) , Glyphosate Toxicity : CK(74) : AC(29), Lipid Peroxidation : CK(692) : AC(252) , Neurotoxicity : CK(46) : AC(25) , Parkinson's Disease : CK(526) : AC(164), Pesticide Toxicity : CK(188) : AC(59)

**Problem Substances** : Dimethoate : CK(3) : AC(1) , Glyphosate : CK(498) : AC(159) , Pesticides : CK(827) : AC(95), Zineb : CK(1) : AC(1)

**Adverse Pharmacological Actions** : Apoptotic : CK(8) : AC(7) , Hepatotoxic : CK(320) : AC(92) , Neurotoxic : CK(1239) : AC(224), Oxidant : CK(113) : AC(43)

# Donepezil (trade name Aricept) (AC 7) (CK 76)

## 21 percent of patients who receive donepezil discontinue treatment due to adverse side effects.

**Pubmed Data** : Ugeskr Laeger. 2009 Dec 7;171(50):3690-3. PMID: [20003864](#)

**Article Published Date** : Dec 07, 2009

**Authors** : Tanja Korfitsen Carøe, Claus Moe

**Study Type** : Meta Analysis

### Additional Links

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Diarrhea: Drug-Associated : CK(22) : AC(2)

**Problem Substances** : Donepezil (trade name Aricept) : CK(89) : AC(8)

Acupuncture improves the overall function, cognition and activity of daily life in patients and the efficacy was superior to donepezil.

**Pubmed Data** : Zhongguo Zhen Jiu. 2014 Dec ;34(12):1156-60. PMID: [25876339](#)

**Article Published Date** : Nov 30, 2014

**Authors** : Wei Gu, Xiao-Xian Jin, Yan-Jun Zhang, Zhen-Jie Li, Yang Kong

**Study Type** : Human Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Therapeutic Actions** : Acupuncture : CK(1939) : AC(222)

**Additional Keywords** : Donepezil Alternatives : CK(20) : AC(2), Mind-Body Medicine : CK(65) : AC(6), Therapeutic Action Superior to Drug Therapy : CK(464) : AC(49)

**Problem Substances** : Donepezil (trade name Aricept) : CK(89) : AC(8)

---

## Cholinesterase inhibitor drug use is associated with increased incidence of bradycardia.

**Pubmed Data** : J Am Geriatr Soc. 2009 Nov;57(11):1997-2003. Epub 2009 Sep 28. PMID: [19793162](#)

**Article Published Date** : Nov 01, 2009

**Authors** : Rohini K Hernandez, Wildon Farwell, Michael D Cantor, Elizabeth V Lawler

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Bradycardia : CK(44) : AC(6), Dementia : CK(571) : AC(79)

**Problem Substances** : Cholinesterase Inhibitor Drugs : CK(135) : AC(9), Donepezil (trade name Aricept) : CK(89) : AC(8)

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## Donepezil and memantine are known to cause bradycardia and to reduce the epileptogenic threshold.

**Pubmed Data** : Therapie. 2010 May-Jun;65(3):255-9. Epub 2010 Aug 11. PMID: [20699079](#)

**Article Published Date** : May 01, 2010

**Authors** : Samy Babai, Pascal Auriche, Hervé Le-Louët

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376), Bradycardia : CK(44) : AC(6), Epileptic Seizures : CK(192) : AC(10)

**Problem Substances** : Donepezil (trade name Aricept) : CK(89) : AC(8), Memantine : CK(42) : AC(3)

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## Donepezil markedly potentiates memantine neurotoxicity.

**Pubmed Data** : Neurobiol Aging. 2008 Feb ;29(2):153-67. Epub 2006 Nov 16. PMID: [17112636](#)

**Article Published Date** : Feb 01, 2008

**Authors** : Catherine E Creeley, David F Wozniak, Anthony Nardi, Nuri B Farber, John W Olney

**Study Type** : Animal Study

#### Additional Links

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Pharmacological Actions** : Apoptotic : CK(2941) : AC(2062)

**Additional Keywords** : Drug Synergy : CK(351) : AC(156)

**Problem Substances** : Donepezil (trade name Aricept) : CK(89) : AC(8) , Memantine : CK(42) : AC(3)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Donepezil-associated bradyarrhythmia in a patient with dementia with Lewy bodies (DLB) has been reported.

**Pubmed Data** : Alzheimer Dis Assoc Disord. 2010 Apr-Jun;24(2):209-11. PMID: [20505440](#)

**Article Published Date** : Apr 01, 2010

**Authors** : Michael H Rosenbloom, Richard Finley, Melvin M Scheinman, Mitchell D Feldman, Bruce L Miller, Gil D Rabinovici

**Study Type** : Human: Case Report

#### Additional Links

**Diseases** : Bradycardia : CK(44) : AC(6) , Dementia : CK(571) : AC(79) , Dementia with Lewy bodies (DLB) : CK(3) : AC(1)

**Problem Substances** : Donepezil (trade name Aricept) : CK(89) : AC(8)

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## The cholinesterase inhibitor drugs may increase tremor and exacerbation of Parkinson's disease.

**Pubmed Data** : Prescrire Int. 2007 Oct;16(91):197-8. PMID: [17926835](#)

**Article Published Date** : Oct 01, 2007

**Authors** : [No authors listed]

**Study Type** : Review

#### Additional Links

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Dementia : CK(571) : AC(79) , Parkinson's Disease : CK(525) : AC(163) , Parkinsonism : CK(12) : AC(8) , Tremor : CK(39) : AC(8)

**Problem Substances** : Cholinesterase Inhibitor Drugs : CK(135) : AC(9) , Donepezil (trade name Aricept) : CK(89) : AC(8) , Galantamine : CK(1) : AC(1) , Rivastigmine : CK(21) : AC(2)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Eptastigmine (AC 1) (CK 3)

### Two cases of suicide in patients with a diagnosis of

**probable Alzheimer disease and who were treated with cholinesterase inhibitor drugs have been reported.**

**Pubmed Data** : Alzheimer Dis Assoc Disord. 1999 Apr-Jun;13(2):88-90. PMID: [10372951](#)

**Article Published Date** : Apr 01, 1999

**Authors** : S H Ferris, G T Hofeldt, G Carbone, P Masciandaro, W M Troetel, B P Imbimbo

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Problem Substances** : [Cholinesterase Inhibitor Drugs](#) : CK(135) : AC(9) , [Eptastigmine](#) : CK(3) : AC(1)

---

## Excitotoxins (AC 1) (CK 1)

**Excitotoxins (e.g. aspartame, glutamate) may play a significant role in the degeneration in ALS.**

**Pubmed Data** : Acta Neuropathol. 2013 Jan ;125(1):95-109. Epub 2012 Nov 13. PMID: [23143228](#)

**Article Published Date** : Dec 31, 2012

**Authors** : Alice Brockington, Ke Ning, Paul R Heath, Elizabeth Wood, Janine Kirby, Nicolò Fusi, Neil Lawrence, Stephen B Wharton, Paul G Ince, Pamela J Shaw

**Study Type** : Review

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Problem Substances** : [Excitotoxins](#) : CK(1) : AC(1)

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## Fluoride (AC 2) (CK 4)

**Aluminium, fluoride and a combination of aluminium-fluoride treatments caused an increase in brain lipid peroxidation products and reactive oxygen species formation.**

**Pubmed Data** : Pathophysiology. 2015 Mar ;22(1):39-48. Epub 2014 Dec 13. PMID: [25577494](#)

**Article Published Date** : Feb 28, 2015

**Authors** : Ibukun Dorcas Akinrinade, Adejoke Elizabeth Memudu, Olalekan Michael Ogundele, Olanrewaju Ibrahim Ajetunmobi

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Aluminum Toxicity : CK(195) : AC(75), Brain Inflammation : CK(246) : AC(140), Fluoride Toxicity : CK(186) : AC(62), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Additional Keywords** : Increased Risk : CK(1375) : AC(171), Increased Risk : CK(1375) : AC(171)

**Problem Substances** : Aluminum : CK(274) : AC(78), Fluoride : CK(398) : AC(83), Sodium Fluoride : CK(190) : AC(62)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Excessive fluoride and aluminium intake induces the progression of cell death which inhibit AChE activities and trigger the release of lysosomal and cell cycle proteins.

**Pubmed Data** : Pathophysiology. 2015 Jun ;22(2):105-15. Epub 2015 Apr 2. PMID: [25863844](#)

**Article Published Date** : May 31, 2015

**Authors** : Ibukun Dorcas Akinrinade, Adejoke Elizabeth Memudu, Olalekan Michael Ogundele

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Additional Keywords** : Increased Risk : CK(1385) : AC(172)

**Problem Substances** : Aluminum : CK(274) : AC(78), Fluoride : CK(398) : AC(83), Sodium Fluoride : CK(190) : AC(62)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Galantamine (AC 1) (CK 1)

### The cholinesterase inhibitor drugs may increase tremor and exacerbation of Parkinson's disease.

**Pubmed Data** : Prescrire Int. 2007 Oct;16(91):197-8. PMID: [17926835](#)

**Article Published Date** : Oct 01, 2007

**Authors** : [No authors listed]

**Study Type** : Review

#### Additional Links

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Dementia : CK(571) : AC(79) , Parkinson's Disease : CK(525) : AC(163) , Parkinsonism : CK(12) : AC(8) , Tremor : CK(39) : AC(8)

**Problem Substances** : Cholinesterase Inhibitor Drugs : CK(135) : AC(9) , Donepezil (trade name Aricept) : CK(89) : AC(8) , Galantamine : CK(1) : AC(1) , Rivastigmine : CK(21) : AC(2)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Gluten (AC 1) (CK 1)

**Celiac disease should be ruled out in the differential diagnosis of neurological dysfunction of unknown cause, including ataxia, epilepsy and dementia.**

**Pubmed Data** : Arq Neuropsiquiatr. 2004 Dec ;62(4):969-72. Epub 2004 Dec 15. PMID: [15608953](#)

**Article Published Date** : Dec 01, 2004

**Authors** : José Ibiapina Siqueira Neto, Ana Carolina Leite Vieira Costa, Francisco George Magalhães, Gisele Sampaio Silva

**Study Type** : Review

#### Additional Links

**Diseases** : Ataxia : CK(116) : AC(17) , Celiac Disease : CK(1612) : AC(232) , Dementia : CK(571) : AC(79) , Epilepsy : CK(248) : AC(62)

**Problem Substances** : Gluten : CK(1087) : AC(166)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Glyphosate (AC 4) (CK 5)

**"Effect of pesticides on cell survival in liver and brain rat tissues."**

**Pubmed Data** : Ecotoxicol Environ Saf. 2009 Oct ;72(7):2025-32. Epub 2009 Jun 2. PMID: [19493570](#)

**Article Published Date** : Oct 01, 2009

**Authors** : Mariana Astiz, María J T de Alaniz, Carlos Alberto Marra

**Study Type** : In Vitro Study

### Additional Links

**Diseases** : Chemically-Induced Liver Damage : CK(629) : AC(252) , Glyphosate Toxicity : CK(74) : AC(29), Lipid Peroxidation : CK(692) : AC(252), Neurotoxicity : CK(46) : AC(25), Parkinson's Disease : CK(526) : AC(164), Pesticide Toxicity : CK(188) : AC(59)

**Problem Substances** : Dimethoate : CK(3) : AC(1), Glyphosate : CK(498) : AC(159), Pesticides : CK(827) : AC(95), Zineb : CK(1) : AC(1)

**Adverse Pharmacological Actions** : Apoptotic : CK(8) : AC(7), Hepatotoxic : CK(320) : AC(92), Neurotoxic : CK(1239) : AC(224), Oxidant : CK(113) : AC(43)

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## Exposure to glyphosate- and/or Mn/Zn-ethylene-bis-dithiocarbamate-containing pesticides leads to degeneration of γ-aminobutyric acid and dopamine neurons in *Caenorhabditis elegans*.

**Pubmed Data** : Neurotox Res. 2012 Apr ;21(3):281-90. Epub 2011 Sep 16. PMID: [21922334](#)

**Article Published Date** : Apr 01, 2012

**Authors** : Rekek Negga, J Andrew Stuart, Morgan L Machen, Joel Salva, Amanda J Lizek, S Jayne Richardson, Amanda S Osborne, Oriol Mirallas, Kenneth A McVey, Vanessa A Fitsanakis

**Study Type** : In Vitro Study

### Additional Links

**Diseases** : Dopamine Levels: Low : CK(4) : AC(1) , Glyphosate Toxicity : CK(74) : AC(29) , Neurodegenerative Diseases : CK(3370) : AC(846), Neurotoxicity : CK(46) : AC(25), Parkinson's Disease : CK(526) : AC(164), Parkinsonian Disorders : CK(15) : AC(4), Substantia Nigra: Damage : CK(3) : AC(1)

**Problem Substances** : Glyphosate : CK(498) : AC(159)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Glyphosate induces cell death through apoptotic and autophagic mechanisms, indicating a mechanism behind the association between glyphosate exposure and Parkinsonism.

**Pubmed Data** : Neurotoxicol Teratol. 2012 Apr 4. Epub 2012 Apr 4. PMID: [22504123](#)

**Article Published Date** : Apr 04, 2012

**Authors** : Ya-Xing Gui, Xiao-Ning Fan, Hong-Mei Wang, Gang Wang, Sheng-di Chen

**Study Type** : In Vitro Study

### Additional Links

**Diseases** : Parkinson's Disease : CK(526) : AC(164), Parkinsonian Disorders : CK(15) : AC(4)

**Problem Substances** : Glyphosate : CK(498) : AC(159)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Glyphosate pesticides leads to neurodegeneration in

## Caenorhabditis elegans.

**Pubmed Data** : Neurotoxicology. 2011 Jun ;32(3):331-41. Epub 2011 Mar 3. PMID: [21376751](#)

**Article Published Date** : Jun 01, 2011

**Authors** : Rekek Negga, David A Rudd, Nathan S Davis, Amanda N Justice, Holly E Hatfield, Ana L Valente, Anthony S Fields, Vanessa A Fitsanakis

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Neurodegenerative Diseases](#) : CK(3376) : AC(850), [Neurotoxicity](#) : CK(46) : AC(25)

**Problem Substances** : [Glyphosate](#) : CK(498) : AC(159)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Glyphosate formulations (AC 1) (CK 2)

### MECHANISMS UNDERLYING THE NEUROTOXICITY INDUCED BY GLYPHOSATE-BASED HERBICIDE IN IMMATURE RAT HIPPOCAMPUS: INVOLVEMENT OF GLUTAMATE EXCITOTOXICITY.

**Pubmed Data** : Toxicology. 2014 Mar 14. Epub 2014 Mar 14. PMID: [24636977](#)

**Article Published Date** : Mar 13, 2014

**Authors** : Daiane Cattani, Vera Lúcia de Liz Oliveira Cavalli, Carla Elise Heinz Rieg, Juliana Tonietto Domingues, Tharine Dal-Cim, Carla Inês Tasca, Fátima Regina Mena Barreto Silva, Ariane Zamoner

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376), [Brain Inflammation](#) : CK(246) : AC(140), [Neurotoxicity](#) : CK(46) : AC(25), [Parkinson's Disease](#) : CK(525) : AC(163), [Parkinsonism](#) : CK(12) : AC(8)

**Problem Substances** : [Glyphosate formulations](#) : CK(522) : AC(160), [Roundup \(herbicide\)](#) : CK(476) : AC(156)

**Adverse Pharmacological Actions** : [Excitotoxic](#) : CK(10) : AC(1), [Neurotoxic](#) : CK(1239) : AC(224)

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## Hydrogenated Oil (AC 1) (CK 10)

## Higher intake of hydrogenated fats may increase the risk of Alzheimer disease.

**Pubmed Data** : Arch Neurol. 2003 Feb;60(2):194-200. PMID: [12580703](#)

**Article Published Date** : Feb 01, 2003

**Authors** : Martha Clare Morris, Denis A Evans, Julia L Bienias, Christine C Tangney, David A Bennett, Neelum Aggarwal, Julie Schneider, Robert S Wilson

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Problem Substances** : [Hydrogenated Oil](#) : CK(150) : AC(24)

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## L-glutamic Acid (AC 1) (CK 10)

### Glutamate levels may contribute to the pathogenesis of ALS.

**Pubmed Data** : Acta Neurol Scand. 2010 Feb;121(2):120-6. Epub 2009 Oct 5. PMID: [19804473](#)

**Article Published Date** : Feb 01, 2010

**Authors** : M L Fiszman, K C Ricart, A Latini, G Rodríguez, R E P Sica

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Problem Substances** : [L-glutamic Acid](#) : CK(11) : AC(2) , [Monosodium Glutamate \(MSG\)](#) : CK(100) : AC(32)

**Adverse Pharmacological Actions** : [Excitotoxic](#) : CK(10) : AC(1)

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## Lead (AC 5) (CK 35)

### Decreased brain volume in adults with childhood lead exposure.

**Pubmed Data** : PLoS Med. 2008 May 27 ;5(5):e112. PMID: [18507499](#)

**Article Published Date** : May 26, 2008

**Authors** : Kim M Cecil, Christopher J Brubaker, Caleb M Adler, Kim N Dietrich, Mekibib Altaye, John C Egelhoff, Stephanie Wessel, Ilayaraja Elangovan, Richard Hornung, Kelly Jarvis, Bruce P Lanphear

**Study Type** : Human Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Childhood Chemical Exposures : CK(165) : AC(17), Childhood Cognitive Disorders : CK(231) : AC(19) , Lead Poisoning : CK(201) : AC(58) , Neurodegenerative Diseases : CK(3370) : AC(846)

**Problem Substances** : Lead : CK(167) : AC(32)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Lead exposure is a risk factor for amyotrophic lateral sclerosis.

**Pubmed Data** : Neurodegener Dis. 2005;2(3-4):195-201. PMID: [16909025](#)

**Article Published Date** : Jan 01, 2005

**Authors** : F Kamel, D M Umbach, H Hu, T L Munsat, J M Shefner, J A Taylor, D P Sandler

**Study Type** : Human Study

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Problem Substances** : Lead : CK(167) : AC(32)

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## Lead may contribute to the pathogenesis of nervous system diseases by stimulating the production of autoantibodies against neural proteins including myelin basic protein.

**Pubmed Data** : Environ Health Perspect. 1994 Dec;102(12):1052-6. PMID: [7536156](#)

**Article Published Date** : Dec 01, 1994

**Authors** : S J Waterman, H A el-Fawal, C A Snyder

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Lead Poisoning : CK(201) : AC(58) , Multiple Sclerosis : CK(953) : AC(182)

**Problem Substances** : Lead : CK(167) : AC(32)

**Adverse Pharmacological Actions** : Immunotoxic : CK(294) : AC(52) , Interleukin-6 up-regulation : CK(14) : AC(3)

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## Lead toxicity may be associated with ALS.

**Pubmed Data** : Rev Neurol (Paris). 1998 May;154(4):345-7. PMID: [9773065](#)

**Article Published Date** : May 01, 1998

**Authors** : P Couratier, P Bernet-Bernady, T Truong, E Lagrange, P M Preux, G Lachatre, J M Vallat

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Bulbar palsy](#) : CK(13) : AC(2)

**Problem Substances** : [Lead](#) : CK(167) : AC(32)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## There is an association between blood lead and the risk of amyotrophic lateral sclerosis.

**Pubmed Data** : Am J Epidemiol. 2010 May 15;171(10):1126-33. Epub 2010 Apr 20. PMID: [20406759](#)

**Article Published Date** : May 15, 2010

**Authors** : Fang Fang, Lydia C Kwee, Kelli D Allen, David M Umbach, Weimin Ye, Mary Watson, Jean Keller, Eugene Z Oddone, Dale P Sandler, Silke Schmidt, Freya Kamel

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Lead Poisoning](#) : CK(201) : AC(58)

**Problem Substances** : [Lead](#) : CK(167) : AC(32)

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## Lovastatin (AC 1) (CK 2)

### Statin drugs exhibit neurotoxicity in an animal neuronal cell line.

**Pubmed Data** : Eur Rev Med Pharmacol Sci. 2011 Sep ;15(9):985-91. PMID: [22013720](#)

**Article Published Date** : Sep 01, 2011

**Authors** : K Vural, M I Tuğlu

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Brain Damage](#) : CK(93) : AC(44) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846) , [Statin-Induced Pathologies](#) : CK(1636) : AC(326)

**Pharmacological Actions** : [Antiproliferative](#) : CK(2461) : AC(1673)

**Problem Substances** : [Atorvastatin](#) : CK(516) : AC(99) , [Lovastatin](#) : CK(267) : AC(68) , [Statin Drugs](#) : CK(4163) : AC(498)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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# Lyme's Disease (*Borrelia burgdorferi*) (AC 3) (CK 9)

## ALS untangled No. 17:"when ALS is lyme".

**Pubmed Data** : Amyotroph Lateral Scler. 2012 Sep ;13(5):487-91. Epub 2012 Aug 8. PMID: [22873562](#)

**Article Published Date** : Aug 31, 2012

**Authors** :

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Problem Substances** : [Lyme's Disease \(\*Borrelia burgdorferi\*\)](#) : CK(25) : AC(6)

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## Immunologic reactivity against *Borrelia burgdorferi* in patients with motor neuron disease.

**Pubmed Data** : Arch Neurol. 1990 May ;47(5):586-94. PMID: [2334308](#)

**Article Published Date** : Apr 30, 1990

**Authors** : J J Halperin, G P Kaplan, S Brazinsky, T F Tsai, T Cheng, A Ironside, P Wu, J Delfiner, M Golightly, R H Brown

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Problem Substances** : [Lyme's Disease \(\*Borrelia burgdorferi\*\)](#) : CK(25) : AC(6)

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## [ALS-like sequelae in chronic neuroborreliosis].

**Pubmed Data** : Wien Med Wochenschr. 1995 ;145(7-8):186-8. PMID: [7610670](#)

**Article Published Date** : Dec 31, 1994

**Authors** : Y Hänsel, M Ackerl, G Stanek

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Problem Substances** : [Lyme's Disease \(\*Borrelia burgdorferi\*\)](#) : CK(25) : AC(6)

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# Memantine (AC 4) (CK 52)

## Donepezil and memantine are known to cause bradycardia and to reduce the epileptogenic threshold.

**Pubmed Data** : Therapie. 2010 May-Jun;65(3):255-9. Epub 2010 Aug 11. PMID: [20699079](#)

**Article Published Date** : May 01, 2010

**Authors** : Samy Babai, Pascal Auriche, Hervé Le-Louët

**Study Type** : Meta Analysis

### Additional Links

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Bradycardia](#) : CK(44) : AC(6) , [Epileptic Seizures](#) : CK(192) : AC(10)

**Problem Substances** : [Donepezil \(trade name Aricept\)](#) : CK(89) : AC(8) , [Memantine](#) : CK(42) : AC(3)

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## Donepezil markedly potentiates memantine neurotoxicity.

**Pubmed Data** : Neurobiol Aging. 2008 Feb ;29(2):153-67. Epub 2006 Nov 16. PMID: [17112636](#)

**Article Published Date** : Feb 01, 2008

**Authors** : Catherine E Creeley, David F Wozniak, Anthony Nardi, Nuri B Farber, John W Olney

**Study Type** : Animal Study

### Additional Links

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Pharmacological Actions** : [Apoptotic](#) : CK(2941) : AC(2062)

**Additional Keywords** : [Drug Synergy](#) : CK(351) : AC(156)

**Problem Substances** : [Donepezil \(trade name Aricept\)](#) : CK(89) : AC(8) , [Memantine](#) : CK(42) : AC(3)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Memantine does not appear to have proven benefit for mild to moderate alzheimer disease.

**Pubmed Data** : Cochrane Database Syst Rev. 2005(3):CD003154. Epub 2005 Jul 20. PMID: [16034889](#)

**Article Published Date** : Jan 01, 2005

**Authors** : Sastre A Areosa, F Sherriff, R McShane

**Study Type** : Meta Analysis

### Additional Links

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Dementia](#) : CK(571) : AC(79)

**Problem Substances** : [Memantine](#) : CK(42) : AC(3)

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## Memantine does not improve significant agitation in people with in moderate-to-severe AD.

**Pubmed Data** : PLoS One. 2012 ;7(5):e35185. Epub 2012 May 2. PMID: [22567095](#)

**Article Published Date** : Jan 01, 2012

**Authors** : Chris Fox, Monica Crugel, Ian Maidment, Bjorn Henrik Auestad, Simon Coulton, Adrian Treloar, Clive Ballard, Malaz Boustani, Cornelius Katona, Gill Livingston

**Study Type** : Human Study

### Additional Links

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Additional Keywords** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Problem Substances** : [Memantine](#) : CK(42) : AC(3)

## Monosodium Glutamate (MSG) (AC 1) (CK 10)

### Glutamate levels may contribute to the pathogenesis of ALS.

**Pubmed Data** : Acta Neurol Scand. 2010 Feb;121(2):120-6. Epub 2009 Oct 5. PMID: [19804473](#)

**Article Published Date** : Feb 01, 2010

**Authors** : M L Fiszman, K C Ricart, A Latini, G Rodríguez, R E P Sica

**Study Type** : Human Study

### Additional Links

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Problem Substances** : [L-glutamic Acid](#) : CK(11) : AC(2) , [Monosodium Glutamate \(MSG\)](#) : CK(100) : AC(32)

**Adverse Pharmacological Actions** : [Excitotoxic](#) : CK(10) : AC(1)

## Nicotine (AC 1) (CK 10)

## Tobacco consumption is associated with increased risk for ALS.

**Pubmed Data** : Am J Epidemiol. 2000 Jan 15;151(2):156-63. PMID: [10645818](#)

**Article Published Date** : Jan 15, 2000

**Authors** : L M Nelson, V McGuire, W T Longstreth, C Matkin

**Study Type** : Human Study

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Nicotine/Tobacco Toxicity : CK(107) : AC(38), Smoking : CK(676) : AC(102)

**Problem Substances** : Nicotine : CK(56) : AC(8) , Tobacco : CK(74) : AC(7)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) (AC 2) (CK 3)

### Curcumins promote monocytic gene expression related to $\beta$ -amyloid and superoxide dismutase clearance.

**Pubmed Data** : Neurodegener Dis. 2012 ;10(1-4):274-6. Epub 2011 Dec 7. PMID: [22156608](#)

**Article Published Date** : Dec 31, 2011

**Authors** : J R Cashman, S Gagliardi, M Lanier, S Ghirmay, K J Abel, M Fiala

**Study Type** : Review

**Additional Links**

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Pharmacological Actions** : Superoxide Dismutase Up-regulation : CK(504) : AC(169)

**Problem Substances** : Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) : CK(1843) : AC(209)

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### The ketogenic diet was neuroprotective and anti-inflammatory against MPTP-neurotoxicity.

**Pubmed Data** : J Mol Neurosci. 2010 Oct ;42(2):145-53. Epub 2010 Mar 24. PMID: [20333481](#)

**Article Published Date** : Sep 30, 2010

**Authors** : Xinxin Yang, Baohua Cheng

**Study Type** : Animal Study

### Additional Links

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140), Brain: Microglial Activation : CK(82) : AC(53) , Parkinson's Disease : CK(525) : AC(163)

**Therapeutic Actions** : Dietary Modification: Low Carbohydrate/Ketogenic : CK(315) : AC(52)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Problem Substances** : Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) : CK(1838) : AC(206)

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## Paracetamol (AC 1) (CK 1)

**Curcumin is a potential therapy for diseases where the deleterious effects of oxidative stress are due to aberrant Ca<sup>2+</sup> entry mediated by TRPM2 channels.**

**Pubmed Data** : Redox Biol. 2015 Nov 10 ;7:1-7. Epub 2015 Nov 10. PMID: [26609559](#)

**Article Published Date** : Nov 09, 2015

**Authors** : E Kheradpezhough, G J Barritt, G Y Rychkov

**Study Type** : In Vitro Study

### Additional Links

**Substances** : Curcumin : CK(4128) : AC(2171)

**Diseases** : Liver Damage : CK(867) : AC(324), Liver Damage: Drug-Induced : CK(91) : AC(25) , Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3799) : AC(1356)

**Pharmacological Actions** : Hepatoprotective : CK(1342) : AC(581), Transient Receptor Potential Melastatin 2 Inhibition : CK(1) : AC(1)

**Problem Substances** : Acetaminophen : CK(83) : AC(29), Paracetamol : CK(119) : AC(35)

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## Pesticides (AC 5) (CK 42)

**"Effect of pesticides on cell survival in liver and brain rat tissues."**

**Pubmed Data** : Ecotoxicol Environ Saf. 2009 Oct ;72(7):2025-32. Epub 2009 Jun 2. PMID: [19493570](#)

**Article Published Date** : Oct 01, 2009

**Authors** : Mariana Astiz, María J T de Alaniz, Carlos Alberto Marra

**Study Type :** In Vitro Study

**Additional Links**

**Diseases :** Chemically-Induced Liver Damage : CK(629) : AC(252) , Glyphosate Toxicity : CK(74) : AC(29) , Lipid Peroxidation : CK(692) : AC(252) , Neurotoxicity : CK(46) : AC(25) , Parkinson's Disease : CK(526) : AC(164) , Pesticide Toxicity : CK(188) : AC(59)

**Problem Substances :** Dimethoate : CK(3) : AC(1) , Glyphosate : CK(498) : AC(159) , Pesticides : CK(827) : AC(95) , Zineb : CK(1) : AC(1)

**Adverse Pharmacological Actions :** Apoptotic : CK(8) : AC(7) , Hepatotoxic : CK(320) : AC(92) , Neurotoxic : CK(1239) : AC(224) , Oxidant : CK(113) : AC(43)

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## Occupational exposure to pesticides appears to increases the risk of Parkinson's disease.

**Pubmed Data :** Environ Int. 2012 Oct 1 ;46:30-43. Epub 2012 Jun 13. PMID: [22698719](#)

**Article Published Date :** Sep 30, 2012

**Authors :** Geneviève Van Maele-Fabry, Perrine Hoet, Fabienne Vilain, Dominique Lison

**Study Type :** Meta Analysis

**Additional Links**

**Diseases :** Parkinson's Disease : CK(526) : AC(164)

**Problem Substances :** Pesticides : CK(827) : AC(95)

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## Occupational exposures to agricultural chemicals is associated with increased risk for ALS.

**Pubmed Data :** Am J Epidemiol. 1997 Jun 15;145(12):1076-88. PMID: [9199537](#)

**Article Published Date :** Jun 15, 1997

**Authors :** V McGuire, W T Longstreth, L M Nelson, T D Koepsell, H Checkoway, M S Morgan, G van Belle

**Study Type :** Human Study

**Additional Links**

**Diseases :** Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Problem Substances :** Agricultural Chemicals : CK(10) : AC(1) , Pesticides : CK(827) : AC(95)

**Adverse Pharmacological Actions :** Neurotoxic : CK(1239) : AC(224)

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## Pesticide exposure is associated with an increased risk of amyotrophic lateral sclerosis.

**Pubmed Data :** Ann Ist Super Sanita. 2010;46(3):284-7. PMID: [20847462](#)

**Article Published Date :** Jan 01, 2010

**Authors :** Francesca Bonvicini, Norina Marcello, Jessica Mandrioli, Vladimiro Pietrini, Marco Vinceti

**Study Type :** Human Study

**Additional Links**

**Diseases :** Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Problem Substances** : Pesticides : CK(827) : AC(95)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Pesticides and human chronic diseases: evidences, mechanisms, and perspectives.

**Pubmed Data** : Toxicol Appl Pharmacol. 2013 Apr 15 ;268(2):157-77. Epub 2013 Feb 9. PMID: [23402800](#)

**Article Published Date** : Apr 14, 2013

**Authors** : Sara Mostafalou, Mohammad Abdollahi

**Study Type** : Review

**Additional Links**

**Diseases** : Abnormalities : CK(11) : AC(2) , Amyotrophic Lateral Sclerosis : CK(567) : AC(140) , Drug-Induced : CK(11) : AC(2), Oxidative Stress : CK(3800) : AC(1357)

**Additional Keywords** : Epigenetic Modification : CK(218) : AC(88)

**Problem Substances** : Pesticides : CK(827) : AC(95)

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## Rivastigmine (AC 1) (CK 1)

### The cholinesterase inhibitor drugs may increase tremor and exacerbation of Parkinson's disease.

**Pubmed Data** : Prescrire Int. 2007 Oct;16(91):197-8. PMID: [17926835](#)

**Article Published Date** : Oct 01, 2007

**Authors** : [No authors listed]

**Study Type** : Review

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Dementia : CK(571) : AC(79) , Parkinson's Disease : CK(525) : AC(163), Parkinsonism : CK(12) : AC(8), Tremor : CK(39) : AC(8)

**Problem Substances** : Cholinesterase Inhibitor Drugs : CK(135) : AC(9) , Donepezil (trade name Aricept) : CK(89) : AC(8), Galantamine : CK(1) : AC(1), Rivastigmine : CK(21) : AC(2)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Rotenone (AC 2) (CK 6)

### Amurensin G induces autophagy and attenuates cellular toxicities in a rotenone model of Parkinson's disease.

**Pubmed Data** : Biochem Biophys Res Commun. 2013 Mar 29 ;433(1):121-6. Epub 2013 Feb 26.  
PMID: [23485458](#)

**Article Published Date** : Mar 28, 2013

**Authors** : Hyun-Wook Ryu, Won Keun Oh, Ik-Soon Jang, Junsoo Park

**Study Type** : Human In Vitro

#### Additional Links

**Substances** : [Amurensin G](#) : CK(5) : AC(1)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Phytotherapy](#) : CK(1175) : AC(216)

**Problem Substances** : [Rotenone](#) : CK(5) : AC(1)

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### Curcumin loaded lactoferrin nanoparticles could be a promising drug delivery strategy against neurotoxicity in dopaminergic neurons.

**Pubmed Data** : Neurochem Int. 2016 Jan 27. Epub 2016 Jan 27. PMID: [26826319](#)

**Article Published Date** : Jan 26, 2016

**Authors** : V Satish Bollimpelli, Prashant Kumar, Sonali Kumari, Anand K Kondapi

**Study Type** : In Vitro Study

#### Additional Links

**Substances** : [Curcumin](#) : CK(4128) : AC(2171)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Problem Substances** : [Rotenone](#) : CK(5) : AC(1)

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## Roundup (herbicide) (AC 1) (CK 2)

### MECHANISMS UNDERLYING THE NEUROTOXICITY INDUCED

## BY GLYPHOSATE-BASED HERBICIDE IN IMMATURE RAT HIPPOCAMPUS: INVOLVEMENT OF GLUTAMATE EXCITOTOXICITY.

**Pubmed Data** : Toxicology. 2014 Mar 14. Epub 2014 Mar 14. PMID: [24636977](#)

**Article Published Date** : Mar 13, 2014

**Authors** : Daiane Cattani, Vera Lúcia de Liz Oliveira Cavalli, Carla Elise Heinz Rieg, Juliana Tonietto Domingues, Tharine Dal-Cim, Carla Inês Tasca, Fátima Regina Mena Barreto Silva, Ariane Zamoner

**Study Type** : Animal Study

### Additional Links

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Brain Inflammation : CK(246) : AC(140), Neurotoxicity : CK(46) : AC(25) , Parkinson's Disease : CK(525) : AC(163) , Parkinsonism : CK(12) : AC(8)

**Problem Substances** : Glyphosate formulations : CK(522) : AC(160) , Roundup (herbicide) : CK(476) : AC(156)

**Adverse Pharmacological Actions** : Excitotoxic : CK(10) : AC(1) , Neurotoxic : CK(1239) : AC(224)

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## Simvastatin (AC 1) (CK 1)

### Cognitive impairment associated with statin drug use has been reported.

**Pubmed Data** : Pharmacotherapy. 2003 Dec ;23(12):1663-7. PMID: [14695047](#)

**Article Published Date** : Dec 01, 2003

**Authors** : Deborah S King, Amanda J Wilburn, Marion R Wofford, T Kristopher Harrell, Brent J Lindley, Daniel W Jones

**Study Type** : Review

### Additional Links

**Diseases** : Cognitive Decline/Dysfunction : CK(1138) : AC(212) , Dementia : CK(571) : AC(79) , Memory Disorders : CK(340) : AC(103)

**Problem Substances** : Atorvastatin : CK(516) : AC(99) , Cholesterol Lowering Drugs : CK(2451) : AC(391), Simvastatin : CK(752) : AC(152) , Statin Drugs : CK(4163) : AC(498)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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# Sodium Fluoride (AC 3) (CK 5)

**Aluminium, fluoride and a combination of aluminium-fluoride treatments caused an increase in brain lipid peroxidation products and reactive oxygen species formation.**

**Pubmed Data** : Pathophysiology. 2015 Mar ;22(1):39-48. Epub 2014 Dec 13. PMID: [25577494](#)

**Article Published Date** : Feb 28, 2015

**Authors** : Ibukun Dorcas Akinrinade, Adejoke Elizabeth Memudu, Olalekan Michael Ogundele, Olanrewaju Ibrahim Ajetunmobi

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Aluminum Toxicity : CK(195) : AC(75), Brain Inflammation : CK(246) : AC(140), Fluoride Toxicity : CK(186) : AC(62), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3800) : AC(1357)

**Additional Keywords** : Increased Risk : CK(1375) : AC(171), Increased Risk : CK(1375) : AC(171)

**Problem Substances** : Aluminum : CK(274) : AC(78), Fluoride : CK(398) : AC(83), Sodium Fluoride : CK(190) : AC(62)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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**Excessive fluoride and aluminium intake induces the progression of cell death which inhibit AChE activities and trigger the release of lysosomal and cell cycle proteins.**

**Pubmed Data** : Pathophysiology. 2015 Jun ;22(2):105-15. Epub 2015 Apr 2. PMID: [25863844](#)

**Article Published Date** : May 31, 2015

**Authors** : Ibukun Dorcas Akinrinade, Adejoke Elizabeth Memudu, Olalekan Michael Ogundele

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Neurodegenerative Diseases : CK(3370) : AC(846)

**Additional Keywords** : Increased Risk : CK(1385) : AC(172)

**Problem Substances** : Aluminum : CK(274) : AC(78), Fluoride : CK(398) : AC(83), Sodium Fluoride : CK(190) : AC(62)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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**The toxic effects of fluoride on the central nervous system may be related to the activation of microglia cells.**

**Pubmed Data** : Mediators Inflamm. 2012 ;2012:102954. Epub 2012 Aug 13. PMID: [22933830](#)

**Article Published Date** : Dec 31, 2011

**Authors** : Xi Shuhua, Liu Ziyong, Yan Ling, Wang Fei, Guifan Sun

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Brain: Microglial Activation](#) : CK(82) : AC(53), [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Problem Substances** : [Sodium Fluoride](#) : CK(190) : AC(62)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224), [Oxidant](#) : CK(113) : AC(43)

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## Stannous chloride (AC 1) (CK 1)

**Stannous chloride (tin) has a neurotoxic action via calcium channel currents within neurons.**

**Pubmed Data** : Neurotoxicology. 2008 Nov;29(6):958-63. Epub 2008 Feb 17. PMID: [18644406](#)

**Article Published Date** : Nov 01, 2008

**Authors** : Anke Tomaszewski, Dietrich Büsselberg

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Problem Substances** : [Stannous chloride](#) : CK(21) : AC(16)

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## Statin Drugs (AC 7) (CK 35)

**Cognitive impairment associated with statin drug use has been reported.**

**Pubmed Data** : Pharmacotherapy. 2003 Dec ;23(12):1663-7. PMID: [14695047](#)

**Article Published Date** : Dec 01, 2003

**Authors** : Deborah S King, Amanda J Wilburn, Marion R Wofford, T Kristopher Harrell, Brent J Lindley, Daniel W Jones

**Study Type** : Review

### Additional Links

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79), [Memory Disorders](#) : CK(340) : AC(103)

**Problem Substances** : [Atorvastatin](#) : CK(516) : AC(99), [Cholesterol Lowering Drugs](#) : CK(2451) : AC(391), [Simvastatin](#) : CK(752) : AC(152), [Statin Drugs](#) : CK(4163) : AC(498)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Statin drug use may be linked to neuromuscular diseases and an amyotrophic lateral sclerosis-like syndrome.

**Pubmed Data** : Drug Saf. 2007;30(6):515-25. PMID: [17536877](#)

**Article Published Date** : Jan 01, 2007

**Authors** : I Ralph Edwards, Kristina Star, Anne Kiuru

**Study Type** : Human Study

### Additional Links

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140), [Neuromuscular Diseases](#) : CK(16) : AC(4)

**Problem Substances** : [Statin Drugs](#) : CK(4167) : AC(499)

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## Statin drugs deplete dolichol, which may contribute to statin toxicity and neurodegenerative diseases.

**Pubmed Data** : J Alzheimers Dis. 2004 Apr ;6(2):129-35. PMID: [15096696](#)

**Article Published Date** : Apr 01, 2004

**Authors** : E Bergamini, R Bizzarri, G Cavallini, B Cerbai, E Chiellini, A Donati, Z Gori, A Manfrini, I Parentini, F Signori, I Tamburini

**Study Type** : Review

### Additional Links

**Diseases** : [Molecular Pathologies: Dolichol Depletion](#) : CK(2) : AC(2), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Statin-Induced Pathologies](#) : CK(1636) : AC(326)

**Pharmacological Actions** : [Antioxidants](#) : CK(7191) : AC(2630)

**Problem Substances** : [Statin Drugs](#) : CK(4167) : AC(499)

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## Statin drugs exhibit neurotoxicity in an animal neuronal cell line.

**Pubmed Data** : Eur Rev Med Pharmacol Sci. 2011 Sep ;15(9):985-91. PMID: [22013720](#)

**Article Published Date** : Sep 01, 2011

**Authors** : K Vural, M I Tuğlu

**Study Type** : Animal Study

### Additional Links

**Diseases** : [Brain Damage](#) : CK(93) : AC(44), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Statin-Induced Pathologies](#) : CK(1636) : AC(326)

**Pharmacological Actions** : Antiproliferative : CK(2461) : AC(1673)

**Problem Substances** : Atorvastatin : CK(516) : AC(99), Lovastatin : CK(267) : AC(68), Statin Drugs : CK(4163) : AC(498)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## Statin drugs may cause ALS-like neurodegeneration in susceptible individuals.

**Pubmed Data** : Drug Saf. 2009;32(8):649-61. PMID: [19591530](#)

**Article Published Date** : Jan 01, 2009

**Authors** : Beatrice A Golomb, Edwin K Kwon, Sabrina Koperski, Marcella A Evans

**Study Type** : Human Study

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140), Neurodegenerative Diseases : CK(3370) : AC(846), Oxidative Stress : CK(3799) : AC(1356)

**Problem Substances** : Statin Drugs : CK(4167) : AC(499)

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## Statin-associated adverse cognitive effects have been reported with 90% resolving after drug discontinuation.

**Pubmed Data** : Pharmacotherapy. 2009 Jul ;29(7):800-11. PMID: [19558254](#)

**Article Published Date** : Jul 01, 2009

**Authors** : Marcella A Evans, Beatrice A Golomb

**Study Type** : Human Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375), Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79), Memory Disorders : CK(340) : AC(103), Memory Loss : CK(153) : AC(40)

**Problem Substances** : Statin Drugs : CK(4163) : AC(498)

**Adverse Pharmacological Actions** : Neurotoxic : CK(1239) : AC(224)

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## The adverse effects of statins may be amplified in the elderly, and include cancer, neurodegenerative conditions, heart failure and accelerated aging.

**Pubmed Data** : Expert Opin Drug Saf. 2005 May ;4(3):389-97. PMID: [15934847](#)

**Article Published Date** : May 01, 2005

**Authors** : Beatrice Alexandra Golomb

**Study Type** : Commentary

**Additional Links**

**Diseases** : Cancers: All : CK(14296) : AC(4541), Elderly: Age Specific Diseases : CK(442) : AC(38), Heart Failure : CK(908) : AC(123), Neurodegenerative Diseases : CK(3370) : AC(846), Statin-Induced Pathologies : CK(1636) : AC(326)

## Sugary soda (AC 1) (CK 1)

**Aluminium beverage cans contribute significant amounts of aluminium, particularly in beverages with decreasing ph such as soft drinks**

**Pubmed Data** : Med J Aust. 1992 May 4;156(9):604-5. PMID: [1625612](#)

**Article Published Date** : May 04, 1992

**Authors** : J M Duggan, J E Dickeson, P F Tynan, A Houghton, J E Flynn

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Problem Substances** : [Aluminium Cans](#) : CK(7) : AC(5) , [Sugary soda](#) : CK(209) : AC(26)

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## Tamoxifen (AC 1) (CK 2)

**The oral administration of delta tocotrienol may be useful in the treatment of Parkinson's disease patients.**

**Pubmed Data** : Neurosci Lett. 2015 Oct 30. Epub 2015 Oct 30. PMID: [26523792](#)

**Article Published Date** : Oct 29, 2015

**Authors** : Kazuhiro Nakaso, Yosuke Horikoshi, Toru Takahashi, Takehiko Hanaki, Masato Nakasone, Yoshinori Kitagawa, Taisuke Koike, Tatsuya Matsura

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Tocotrienol: Delta](#) : CK(42) : AC(22) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Problem Substances** : [Tamoxifen](#) : CK(338) : AC(51)

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## Thimerosal (AC 2) (CK 5)

**A series of case studies demonstrate that thimerosal exposure is a major contributing factor to the pathogenesis of autism spectrum disorders.**

**Pubmed Data** : J Toxicol Environ Health A. 2007 May 15;70(10):837-51. PMID: [17454560](#)

**Article Published Date** : May 15, 2007

**Authors** : David A Geier, Mark R Geier

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Autism Spectrum Disorders](#) : CK(1460) : AC(158) , [Mercury Poisoning](#) : CK(195) : AC(55) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Problem Substances** : [Thimerosal](#) : CK(339) : AC(55)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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**There are lasting neuropathological changes in rat brain after intermittent neonatal administration of thimerosal.**

**Pubmed Data** : Folia Neuropathol. 2010 ;48(4):258-69. PMID: [21225508](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Mieszko Olczak, Michalina Duszczyk, Paweł Mierzejewski, Teresa Wierzba-Bobrowicz, Maria D Majewska

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Infant Chemical Exposures](#) : CK(175) : AC(25) , [Neurodegenerative Diseases](#) : CK(3376) : AC(850) , [Vaccine-induced Toxicity](#) : CK(1288) : AC(194)

**Problem Substances** : [Thimerosal](#) : CK(339) : AC(55)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Tobacco (AC 2) (CK 20)

**Cigarette smoking is associated with increased risk for ALS.**

**Pubmed Data** : Neuroepidemiology. 1999;18(4):194-202. PMID: [10364720](#)

**Article Published Date** : Jan 01, 1999

**Authors** : F Kamel, D M Umbach, T L Munsat, J M Shefner, D P Sandler

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Smoking](#) : CK(676) : AC(102)

**Problem Substances** : [Tobacco](#) : CK(74) : AC(7)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Tobacco consumption is associated with increased risk for ALS.

**Pubmed Data** : Am J Epidemiol. 2000 Jan 15;151(2):156-63. PMID: [10645818](#)

**Article Published Date** : Jan 15, 2000

**Authors** : L M Nelson, V McGuire, W T Longstreth, C Matkin

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140) , [Nicotine/Tobacco Toxicity](#) : CK(107) : AC(38), [Smoking](#) : CK(676) : AC(102)

**Problem Substances** : [Nicotine](#) : CK(56) : AC(8) , [Tobacco](#) : CK(74) : AC(7)

**Adverse Pharmacological Actions** : [Neurotoxic](#) : CK(1239) : AC(224)

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## Zineb (AC 1) (CK 1)

### "Effect of pesticides on cell survival in liver and brain rat tissues."

**Pubmed Data** : Ecotoxicol Environ Saf. 2009 Oct ;72(7):2025-32. Epub 2009 Jun 2. PMID: [19493570](#)

**Article Published Date** : Oct 01, 2009

**Authors** : Mariana Astiz, María J T de Alaniz, Carlos Alberto Marra

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Chemically-Induced Liver Damage](#) : CK(629) : AC(252) , [Glyphosate Toxicity](#) : CK(74) : AC(29), [Lipid Peroxidation](#) : CK(692) : AC(252) , [Neurotoxicity](#) : CK(46) : AC(25) , [Parkinson's Disease](#) : CK(526) : AC(164), [Pesticide Toxicity](#) : CK(188) : AC(59)

**Problem Substances** : [Dimethoate](#) : CK(3) : AC(1) , [Glyphosate](#) : CK(498) : AC(159) , [Pesticides](#) : CK(827) : AC(95), [Zineb](#) : CK(1) : AC(1)

**Adverse Pharmacological Actions** : [Apoptotic](#) : CK(8) : AC(7) , [Hepatotoxic](#) : CK(320) : AC(92) , [Neurotoxic](#) : CK(1239) : AC(224) , [Oxidant](#) : CK(113) : AC(43)

## Zolpidem (trade name Ambien) (AC 1) (CK 10)

**Zolpidem use might be associated with increased risk for dementia in elderly population.**

**Pubmed Data** : Medicine (Baltimore). 2015 May ;94(17):e809. PMID: [25929937](#)

**Article Published Date** : Apr 30, 2015

**Authors** : Hsin-I Shih, Che-Chen Lin, Yi-Fang Tu, Chia-Ming Chang, Hsiang-Chin Hsu, Chih-Hsien Chi, Chia-Hung Kao

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400), [Increased Risk](#) : CK(1385) : AC(172)

**Problem Substances** : [Zolpidem \(trade name Ambien\)](#) : CK(199) : AC(26)

## Category : Therapeutic Actions

### Acupuncture (AC 7) (CK 53)

**Acupuncture improves the overall function, cognition and activity of daily life in patients and the efficacy was superior to donepezil.**

**Pubmed Data** : Zhongguo Zhen Jiu. 2014 Dec ;34(12):1156-60. PMID: [25876339](#)

**Article Published Date** : Nov 30, 2014

**Authors** : Wei Gu, Xiao-Xian Jin, Yan-Jun Zhang, Zhen-Jie Li, Yang Kong

**Study Type** : Human Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Therapeutic Actions** : Acupuncture : CK(1939) : AC(222)

**Additional Keywords** : Donepezil Alternatives : CK(20) : AC(2) , Mind-Body Medicine : CK(65) : AC(6), Therapeutic Action Superior to Drug Therapy : CK(464) : AC(49)

**Problem Substances** : Donepezil (trade name Aricept) : CK(89) : AC(8)

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## Acupuncture in combination with Madopa may improve cerebral glucose metabolism in Parkinson's disease.

**Pubmed Data** : Cardiovasc Hematol Agents Med Chem. 2007 Oct;5(4):295-9. PMID: [19922349](#)

**Article Published Date** : Oct 01, 2007

**Authors** : Yong Huang, Xuemei Jiang, Ying Zhuo, Anwu Tang, Gustav Wik

**Study Type** : Human Study

**Additional Links**

**Diseases** : Parkinson's Disease : CK(526) : AC(164)

**Therapeutic Actions** : Acupuncture : CK(1939) : AC(222)

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## Acupuncture may have therapeutic value in the treatment of Parkinson's disease.

**Pubmed Data** : Neurol Res. 2010 Feb;32 Suppl 1:5-9. PMID: [20034437](#)

**Article Published Date** : Feb 01, 2010

**Authors** : Tong H Joh, Hi-Joon Park, Seung-Nam Kim, Hyejung Lee

**Study Type** : Commentary

**Additional Links**

**Diseases** : Parkinson's Disease : CK(526) : AC(164)

**Therapeutic Actions** : Acupuncture : CK(1939) : AC(222)

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## Acupuncture stimulates neurogenesis and may have therapeutic value in treating certain neurological disorders.

**Pubmed Data** : J Vet Med Sci. 2009 Dec 1; PMID: [19952513](#)

**Article Published Date** : Dec 01, 2009

**Authors** : In Koo Hwang, Jin Young Chung, Dae Young Yoo, Sun Shin Yi, Hwa Young Youn, Je Kyung Seong, Yeo Sung Yoon

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Neurodegenerative Diseases : CK(3376) : AC(850)

**Therapeutic Actions** : Acupuncture : CK(1939) : AC(222)

**Pharmacological Actions** : Neuritogenic : CK(133) : AC(59)

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## Combined treatment with acupuncture and bee venom acupuncture showed promising results as a safe adjunctive therapy for PD.

**Pubmed Data** : J Altern Complement Med. 2015 Oct ;21(10):598-603. Epub 2015 Jul 31. PMID: [26230989](#)

**Article Published Date** : Sep 30, 2015

**Authors** : Kyeong-Hee Doo, Ji-Hyun Lee, Seung-Yeon Cho, Woo-Sang Jung, Sang-Kwan Moon, Jung-Mi Park, Chang-Nam Ko, Ho Kim, Hi-Joon Park, Seong-Uk Park

**Study Type** : Human Study

**Additional Links**

**Substances** : [Bee Venom](#) : CK(72) : AC(35)

**Diseases** : [Parkinson's Disease](#) : CK(525) : AC(163)

**Therapeutic Actions** : [Acupuncture](#) : CK(1939) : AC(222)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

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## Scalp acupuncture combined with auricular point sticking could improve the clinical symptoms and cognitive behavior ability in patients with vascular dementia

**Pubmed Data** : Zhongguo Zhen Jiu. 2014 May ;34(5):417-20. PMID: [25022106](#)

**Article Published Date** : Apr 30, 2014

**Authors** : Si-Kang Li, Ding-Ming Ding, Zheng-Long Zhang, Lan Ma, Hai-Yan Huang, Xiao-Hong Wu

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Acupuncture](#) : CK(1939) : AC(222), [Acupuncture: auricular](#) : CK(40) : AC(4)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Therapeutic Action Superior to Drug Therapy](#) : CK(464) : AC(49)

---

## Significant neurological improvement in two patients with amyotrophic lateral sclerosis after 4 weeks of treatment with acupuncture injection point therapy using enercel.

**Pubmed Data** : J Acupunct Meridian Stud. 2011 Dec ;4(4):257-61. Epub 2011 Oct 19. PMID: [22196509](#)

**Article Published Date** : Nov 30, 2011

**Authors** : Shan Liang, David Christner, Stephanie Du Laux, Daniel Laurent

**Study Type** : Human Study

#### Additional Links

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Therapeutic Actions** : [Acupuncture](#) : CK(1939) : AC(222)

**Additional Keywords** : [Plant Extracts](#) : CK(7290) : AC(2420)

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## Acupuncture: auricular (AC 1) (CK 10)

**Scalp acupuncture combined with auricular point sticking could improve the clinical symptoms and cognitive behavior ability in patients with vascular dementia**

**Pubmed Data** : Zhongguo Zhen Jiu. 2014 May ;34(5):417-20. PMID: [25022106](#)

**Article Published Date** : Apr 30, 2014

**Authors** : Si-Kang Li, Ding-Ming Ding, Zheng-Long Zhang, Lan Ma, Hai-Yan Huang, Xiao-Hong Wu

**Study Type** : Human Study

#### Additional Links

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Acupuncture](#) : CK(1939) : AC(222), [Acupuncture: auricular](#) : CK(40) : AC(4)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Therapeutic Action Superior to Drug Therapy](#) : CK(464) : AC(49)

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## Animal Therapy (AC 1) (CK 10)

**Animal-assisted therapy reduces agitated behaviors and improves social interactions in older adults with dementia.**

**Pubmed Data** : Am J Alzheimers Dis Other Demen. 2003 Nov-Dec;18(6):353-8. PMID: [14682084](#)

**Article Published Date** : Nov 01, 2003

**Authors** : Nancy E Richeson

**Study Type** : Human Study

#### Additional Links

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions :** [Animal Therapy](#) : CK(10) : AC(1)

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## Aquatic therapy (AC 1) (CK 1)

### Aquatherapy for neurodegenerative disorders.

**Pubmed Data :** J Huntingtons Dis. 2014 ;3(1):5-11. PMID: [25062761](#)

**Article Published Date :** Dec 31, 2013

**Authors :** Alyson R Plecash, Blair R Leavitt

**Study Type :** Review

**Additional Links**

**Diseases :** [Amyotrophic lateral sclerosis \(ALS\)](#) : CK(566) : AC(140) , [Multiple Sclerosis](#) : CK(953) : AC(182), [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Therapeutic Actions :** [Aquatic therapy](#) : CK(10) : AC(1), [Exercise](#) : CK(1223) : AC(191)

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## Aromatherapy (AC 3) (CK 30)

### Aromatherapy has a positive effect on dementia in patients with Alzheimer's disease.

**Pubmed Data :** Psychogeriatrics. 2009 Dec ;9(4):173-9. PMID: [20377818](#)

**Article Published Date :** Nov 30, 2009

**Authors :** Daiki Jimbo, Yuki Kimura, Miyako Taniguchi, Masashi Inoue, Katsuya Urakami

**Study Type :** Human Study

**Additional Links**

**Substances :** [Lavender: Essential Oil](#) : CK(176) : AC(20) , [Rosemary: Essential Oil](#) : CK(10) : AC(1)

**Diseases :** [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions :** [Aromatherapy](#) : CK(652) : AC(65)

---

**Lavender aromatherapy has a beneficial effect on emotions and aggressive behavior of elderly with dementia**

**Pubmed Data** : Taehan Kanho Hakhoe Chi. 2005 Apr;35(2):303-12. PMID: [15860944](#)

**Article Published Date** : Apr 01, 2005

**Authors** : Sun-Young Lee

**Study Type** : Human Study

**Additional Links**

**Substances** : [Lavender](#) : CK(363) : AC(45)

**Diseases** : [Aggression](#) : CK(163) : AC(17), [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Aromatherapy](#) : CK(652) : AC(65)

---

## Lavender oil is effective in reducing challenging behaviours in individuals with dementia.

**Pubmed Data** : BMC Geriatr. 2010 ;10:49. Epub 2010 Jul 22. PMID: [20649945](#)

**Article Published Date** : Dec 31, 2009

**Authors** : Eva S van der Ploeg, Barbara Eppingstall, Daniel W O'Connor

**Study Type** : Human Study

**Additional Links**

**Substances** : [Lavender: Essential Oil](#) : CK(176) : AC(20)

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Aromatherapy](#) : CK(652) : AC(65)

---

## Craniosacral Therapy (AC 1) (CK 1)

### Craniosacral therapy has therapeutic value in individuals with dementia.

**Pubmed Data** : J Gerontol Nurs. 2008 Mar;34(3):36-45. PMID: [18350746](#)

**Article Published Date** : Mar 01, 2008

**Authors** : Linda A Gerdner, Laura K Hart, M Bridget Zimmerman

**Study Type** : Commentary

**Additional Links**

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Craniosacral Therapy](#) : CK(32) : AC(5)

---

# Dancing (AC 3) (CK 30)

## Dance therapy reduces agitation in patients with dementia.

**Pubmed Data** : Nurs Times. 2009 Aug 4-17;105(30):19-22. PMID: [19736794](#)

**Authors** : Debbie Duignan, Lynne Hedley, Rachael Milverton

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Anxiety Disorders](#) : CK(1215) : AC(180), [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Dancing](#) : CK(240) : AC(23)

---

## Short duration, intensive tango dancing is an appropriate and effective treatment for patients with mild to moderately severe Parkinson disease.

**Pubmed Data** : Planta Med. 1996 Oct;62(5):405-9. PMID: [19632547](#)

**Article Published Date** : Oct 01, 1996

**Authors** : Madeleine E Hackney, Gammon M Earhart

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

**Therapeutic Actions** : [Dancing](#) : CK(240) : AC(23)

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## Tango lessons improve balance, endurance, balance confidence, and quality of life in a participant with severe Parkinson disease.

**Pubmed Data** : Disabil Rehabil. 2010;32(8):679-84. PMID: [20205582](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Madeleine E Hackney, Gammon M Earhart

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164), [Quality of Life: Poor](#) : CK(438) : AC(45)

**Therapeutic Actions** : [Dancing](#) : CK(240) : AC(23)

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# Dietary Modification: High-Fat/Low-Carbohydrate (AC 1) (CK 1)

**High-fat and ketogenic diets may have value in treating amyotrophic lateral sclerosis.**

**Pubmed Data** : J Child Neurol. 2013 Aug ;28(8):989-92. Epub 2013 May 10. PMID: [23666040](#)

**Article Published Date** : Jul 31, 2013

**Authors** : Sabrina Paganoni, Anne-Marie Wills

**Study Type** : Review

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Dietary Modification: High-Fat/Low-Carbohydrate : CK(1) : AC(1), Dietary Modification: Low Carbohydrate/Ketogenic : CK(315) : AC(52)

# Dietary Modification: Low Carbohydrate/Ketogenic (AC 5) (CK 15)

**A ketogenic diet has anticonvulsant and neuroprotective effects.**

**Pubmed Data** : Przegl Lek. 2010;67(3):205-12. PMID: [20687386](#)

**Article Published Date** : Jan 01, 2010

**Authors** : Tomasz Choragiewicz, Iwona Zarnowska, Maciej Gasior, Tomasz Zarnowski

**Study Type** : Human Study

**Additional Links**

**Diseases** : Parkinson's Disease : CK(525) : AC(163)

**Therapeutic Actions** : Dietary Modification: Low Carbohydrate/Ketogenic : CK(315) : AC(52)

**Pharmacological Actions** : Anticonvulsants : CK(235) : AC(65), Neuroprotective Agents : CK(2237) : AC(1053)

**High-fat and ketogenic diets may have value in treating**

## amyotrophic lateral sclerosis.

**Pubmed Data** : J Child Neurol. 2013 Aug ;28(8):989-92. Epub 2013 May 10. PMID: [23666040](#)

**Article Published Date** : Jul 31, 2013

**Authors** : Sabrina Paganoni, Anne-Marie Wills

**Study Type** : Review

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Dietary Modification: High-Fat/Low-Carbohydrate : CK(1) : AC(1), Dietary Modification: Low Carbohydrate/Ketogenic : CK(315) : AC(52)

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## The ketogenic diet may have therapeutic value in neuromuscular and neurodegenerative Diseases.

**Pubmed Data** : Biomed Res Int. 2014 ;2014:474296. Epub 2014 Jul 3. PMID: [25101284](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Antonio Paoli, Antonino Bianco, Ernesto Damiani, Gerardo Bosco

**Study Type** : Review

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140), Mitochondrial Diseases : CK(224) : AC(90) , Neurodegenerative Diseases : CK(3370) : AC(846), Parkinson's Disease : CK(525) : AC(163)

**Therapeutic Actions** : Dietary Modification: Low Carbohydrate/Ketogenic : CK(315) : AC(52)

---

## The ketogenic diet may have value in ALS.

**Pubmed Data** : Neurol Neurochir Pol. 2011 Jul-Aug;45(4):370-8. PMID: [22101998](#)

**Article Published Date** : Jun 30, 2011

**Authors** : Sergiusz Jóźwiak, Eric H Kossoff, Katarzyna Kotulska-Jóźwiak

**Study Type** : Review

**Additional Links**

**Diseases** : Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140) , Neurodegenerative Diseases : CK(3376) : AC(850)

**Therapeutic Actions** : Dietary Modification: Low Carbohydrate/Ketogenic : CK(315) : AC(52)

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## The ketogenic diet was neuroprotective and anti-inflammatory against MPTP-neurotoxicity.

**Pubmed Data** : J Mol Neurosci. 2010 Oct ;42(2):145-53. Epub 2010 Mar 24. PMID: [20333481](#)

**Article Published Date** : Sep 30, 2010

**Authors** : Xinxin Yang, Baohua Cheng

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Amyotrophic lateral sclerosis (ALS) : CK(566) : AC(140), Brain: Microglial Activation : CK(82) : AC(53) , Parkinson's Disease : CK(525) : AC(163)  
**Therapeutic Actions** : Dietary Modification: Low Carbohydrate/Ketogenic : CK(315) : AC(52)  
**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)  
**Problem Substances** : Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) : CK(1838) : AC(206)

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## Dietary Modification: Mediterranean Diet (AC 2) (CK 20)

**Adherence to the Mediterranean may positively affect not only the risk of AD, but also of predementia syndromes and their progression to overt dementia.**

**Pubmed Data** : Expert Rev Neurother. 2011 May ;11(5):677-708. PMID: [21539488](#)

**Article Published Date** : May 01, 2011

**Authors** : Vincenzo Solfrizzi, Francesco Panza, Vincenza Frisardi, Davide Seripa, Giancarlo Logroscino, Bruno P Imbimbo, Alberto Pilotto

**Study Type** : Human Study

**Additional Links**

**Diseases** : Aging: Brain : CK(246) : AC(84), Dementia : CK(571) : AC(79)

**Therapeutic Actions** : Dietary Modification: Mediterranean Diet : CK(652) : AC(75)

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**The Mediterranean diet is associated with a lower Alzheimer disease mortality.**

**Pubmed Data** : Neurology. 2007 Sep 11 ;69(11):1084-93. PMID: [17846408](#)

**Article Published Date** : Sep 11, 2007

**Authors** : Nikolaos Scarmeas, Jose A Luchsinger, Richard Mayeux, Yaakov Stern

**Study Type** : Human Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376)

**Therapeutic Actions** : Dietary Modification: Mediterranean Diet : CK(652) : AC(75)

---

## Electroacupuncture (AC 2) (CK 12)

### Electro-acupuncture add-on treatment markedly improves activity of daily living and quality of life of Parkinson's disease patients.

**Pubmed Data** : Evid Based Complement Alternat Med. 2015 ;2015:692795. Epub 2015 Aug 13. PMID: [26351515](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Fang Wang, Li Sun, Xiao-Zhe Zhang, Jun Jia, Zhuo Liu, Xi-Yan Huang, Shu-Yang Yu, Li-Jun Zuo, Chen-Jie Cao, Xiao-Min Wang, Wei Zhang

**Study Type** : Human Study

#### Additional Links

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164) , [Quality of Life: Poor](#) : CK(438) : AC(45)

**Therapeutic Actions** : [Electroacupuncture](#) : CK(374) : AC(54)

**Pharmacological Actions** : [Nitric Oxide Inhibitor](#) : CK(223) : AC(108)

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### Electroacupuncture reduces neuroinflammatory responses in symptomatic amyotrophic lateral sclerosis model.

**Pubmed Data** : J Neuroimmunol. 2010 Jun ;223(1-2):84-91. Epub 2010 May 10. PMID: [20460191](#)

**Article Published Date** : May 31, 2010

**Authors** : Eun Jin Yang, Jing Hua Jiang, Sang Min Lee, Hye Suk Hwang, Myeong Soo Lee, Sun Mi Choi

**Study Type** : Animal Study

#### Additional Links

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Therapeutic Actions** : [Electroacupuncture](#) : CK(374) : AC(54)

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## Exercise (AC 36) (CK 150)

### Aerobic fitness may have a positive influence on

## protection of brain even in aMCI CSF biomarker, a high-risk population to convert to AD.

**Pubmed Data** : Age (Dordr). 2016 Jun ;38(3):51. Epub 2016 Apr 23. PMID: [27106271](#)

**Article Published Date** : May 31, 2016

**Authors** : Camila Vieira Ligo Teixeira, Thiago Jr Rezende, Marina Weiler, Mateus H Nogueira, Brunno M Campos, Luiz Fl Pegoraro, Jessica E Vicentini, Gabriela Scriptore, Fernando Cendes, Marcio Lf Balthazar

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Aquatherapy for neurodegenerative disorders.

**Pubmed Data** : J Huntingtons Dis. 2014 ;3(1):5-11. PMID: [25062761](#)

**Article Published Date** : Dec 31, 2013

**Authors** : Alyson R Plecash, Blair R Leavitt

**Study Type** : Review

**Additional Links**

**Diseases** : [Amyotrophic lateral sclerosis \(ALS\)](#) : CK(566) : AC(140) , [Multiple Sclerosis](#) : CK(953) : AC(182), [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Therapeutic Actions** : [Aquatic therapy](#) : CK(10) : AC(1), [Exercise](#) : CK(1223) : AC(191)

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## Beneficial effects of physical exercise have been observed on the maintenance of brain size and efficiency for the prevention of AD risks.

**Pubmed Data** : Biomed Rep. 2016 Apr ;4(4):403-407. Epub 2016 Feb 22. PMID: [27073621](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Wei-Wei Chen, Xia Zhang, Wen-Juan Huang

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Stroke](#) : CK(1322) : AC(163)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Enhanced physical activity counteracts neuron loss and

## behavioral deficits in a transgenic AD mouse model.

**Pubmed Data** : Transl Psychiatry. 2016 ;6:e800. Epub 2016 May 3. PMID: [27138799](#)

**Article Published Date** : Dec 31, 2015

**Authors** : M Hüttenrauch, A Brauß, A Kurdakova, H Borgers, F Klinker, D Liebetanz, G Salinas-Riester, J Wiltfang, H W Klafki, O Wirths

**Study Type** : Transgenic Animal Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Exercise alone was more efficient at improving motor function and reversing ApoE4-associated impairments than antioxidants alone.

**Pubmed Data** : Behav Brain Res. 2016 May 15 ;305:37-45. Epub 2016 Feb 15. PMID: [26892275](#)

**Article Published Date** : May 14, 2016

**Authors** : Kiran Chaudhari, Jessica M Wong, Philip H Vann, Nathalie Sumien

**Study Type** : Animal Study

**Additional Links**

**Substances** : [Vitamin C](#) : CK(1953) : AC(401) , [Vitamin E](#) : CK(1656) : AC(290)

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

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## Exercise could be used as a potential pro-neurogenic and anti-inflammatory intervention for cognition.

**Pubmed Data** : Neurosci Biobehav Rev. 2016 Feb ;61:121-31. Epub 2015 Dec 13. PMID: [26695382](#)

**Article Published Date** : Jan 31, 2016

**Authors** : Sinéad M Ryan, Yvonne M Nolan

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Brain Inflammation](#) : CK(246) : AC(140), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574), [Neurogenesis](#) : CK(59) : AC(30)

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## Exercise delays cognitive decline by the enhancing

## neurogenesis and increasing BDNF expression in the context of vascular dementia.

**Pubmed Data** : Mol Med Rep. 2016 Apr ;13(4):2981-90. Epub 2016 Feb 15. PMID: [26934837](#)

**Article Published Date** : Mar 31, 2016

**Authors** : Dong-Hee Choi, Kyoung-Hee Lee, Jongmin Lee

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

**Pharmacological Actions** : Neurogenesis : CK(59) : AC(30)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## Exercise has been found to lead to cognitive improvement in normal aging.

**Pubmed Data** : Front Aging Neurosci. 2016 ;8:47. Epub 2016 Mar 7. PMID: [27014055](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Pei Huang, Rong Fang, Bin-Yin Li, Sheng-Di Chen

**Study Type** : Review

**Additional Links**

**Diseases** : Aging: Brain : CK(246) : AC(84), Cognitive Decline/Dysfunction : CK(1138) : AC(212), Dementia : CK(571) : AC(79)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

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## Exercise may be described as a polypill to prevent and treat almost every chronic disease.

**Pubmed Data** : Prog Mol Biol Transl Sci. 2015 ;135:497-526. Epub 2015 Aug 14. PMID: [26477928](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Helios Pareja-Galeano, Nuria Garatachea, Alejandro Lucia

**Study Type** : Review

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cancers: All : CK(14297) : AC(4542) , Cardiovascular Diseases : CK(7018) : AC(887) , Diabetes Mellitus: Type 2: Prevention : CK(646) : AC(83), Metabolic Diseases : CK(406) : AC(72)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## Exercise presents a promising non-pharmacological option to potentially delay the onset or slow down the

## progression of AD.

**Pubmed Data** : Ageing Res Rev. 2016 May ;27:77-92. Epub 2016 Mar 31. PMID: [27039886](#)

**Article Published Date** : Apr 30, 2016

**Authors** : Sinéad M Ryan, Áine M Kelly

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Exercise reduced neuropsychiatric symptoms in patients with mild Alzheimer's disease.

**Pubmed Data** : J Alzheimers Dis. 2015 Dec 10 ;50(2):443-53. PMID: [26682695](#)

**Article Published Date** : Dec 09, 2015

**Authors** : Kristine Hoffmann, Nanna A Sobol, Kristian S Frederiksen, Nina Beyer, Asmus Vogel, Karsten Vestergaard, Hans Brændgaard, Hanne Gottrup, Annette Lolk, Lene Wermuth, Søren Jacobsen, Lars P Laugesen, Robert G Gergelyffy, Peter Høgh, Eva Bjerregaard, Birgitte B Andersen, Volkert Siersma, Peter Johannsen, Carl W Cotman, Gunhild Waldemar, Steen G Hasselbalch

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400), [Risk Reduction](#) : CK(6136) : AC(658)

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## Exercise three times a week was effective at reversing serum and brain RANTES and MCP-1 expression to the levels of controls.

**Pubmed Data** : Neurosci Lett. 2016 Jan 1 ;610:165-70. Epub 2015 Nov 4. PMID: [26547034](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Morgan Haskins, Terry E Jones, Qun Lu, Sonja K Bareiss

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Brain Inflammation](#) : CK(246) : AC(140)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4500) : AC(1574)

**Additional Keywords** : [Dose Response](#) : CK(1035) : AC(400), [Risk Reduction](#) : CK(6136) : AC(658)

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## Exercise training increases mitochondrial biogenesis in the brain.

**Pubmed Data** : J Appl Physiol. 2011 Aug 4. Epub 2011 Aug 4. PMID: [21817111](#)

**Article Published Date** : Aug 04, 2011

**Authors** : Jennifer L Steiner, E Angela Murphy, Jamie L McClellan, Martin D Carmichael, J Mark Davis

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Mitochondrial Dysfunction : CK(224) : AC(90), Neurodegenerative Diseases : CK(3376) : AC(850)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

**Additional Keywords** : Mitochondrial Biogenesis : CK(28) : AC(14)

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## Exercise training reduces extracellular soluble A $\beta$ in the brains of Tg2576 mice in a dose-dependent manner.

**Pubmed Data** : Neurobiol Dis. 2016 Jan ;85:218-24. Epub 2015 Nov 10. PMID: [26563933](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Kaitlin M Moore, Renee E Girens, Sara K Larson, Maria R Jones, Jessica L Restivo, David M Holtzman, John R Cirrito, Carla M Yuede, Scott D Zimmerman, Benjamin F Timson

**Study Type** : Transgenic Animal Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Dose Response : CK(1035) : AC(400)

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## Female sex hormones such as estradiol and exercise have a possible neuroprotective role in female patients with ALS.

**Pubmed Data** : Med Hypotheses. 2009 Apr;72(4):434-43. Epub 2009 Jan 19. PMID: [14561497](#)

**Article Published Date** : Apr 01, 2009

**Authors** : J H Veldink, P R Bär, E A J Joosten, M Otten, J H J Wokke, L H van den Berg

**Study Type** : Animal Study

**Additional Links**

**Substances** : Estradiol (E(2)) : CK(22) : AC(15)

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Gender Differences : CK(63) : AC(8)

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## GSK-3 $\beta$ is increased in the brains of individuals with Alzheimer's disease.

**Pubmed Data** : Cell Mol Life Sci. 2016 Mar 24. Epub 2016 Mar 24. PMID: [27010990](#)

**Article Published Date** : Mar 23, 2016

**Authors** : María Llorens-Martín, Catia M Teixeira, Jerónimo Jurado-Arjona, Randeep Rakwal, Junko Shibato, Hideaki Soya, Jesús Ávila

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

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## Healthcare professionals should ensure that people with dementia are encouraged to exercise.

**Pubmed Data** : BMJ Open. 2016 ;6(4):e010767. Epub 2016 Apr 27. PMID: [27121704](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Kate Laver, Suzanne Dyer, Craig Whitehead, Lindy Clemson, Maria Crotty

**Study Type** : Review

**Additional Links**

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Increasing energy output from a variety of physical activities is related to larger gray matter volumes in the elderly, regardless of cognitive status.

**Pubmed Data** : J Alzheimers Dis. 2016 Mar 11. Epub 2016 Mar 11. PMID: [26967227](#)

**Article Published Date** : Mar 10, 2016

**Authors** : Cyrus A Raji, David A Merrill, Harris Eyre, Sravya Mallam, Nare Torosyan, Kirk I Erickson, Oscar L Lopez, James T Becker, Owen T Carmichael, H Michael Gach, Paul M Thompson, W T Longstreth, Lewis H Kuller

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79), [Sitting Sickness](#) : CK(95) : AC(13)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Risk Reduction](#) : CK(6136) : AC(658)

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## Inflammation is particularly detrimental in inactive older adults and may exacerbate the negative effects of physical inactivity on brain.

**Pubmed Data** : Hum Brain Mapp. 2016 May 9. Epub 2016 May 9. PMID: [27159568](#)

**Article Published Date** : May 08, 2016

**Authors** : Goran Papenberg, Beata Ferencz, Francesca Mangialasche, Patrizia Mecocci, Roberta Cecchetti, Grégoria Kalpouzos, Laura Fratiglioni, Lars Bäckman

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Aging: Brain](#) : CK(246) : AC(84), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79), [Inflammation](#) : CK(2863) : AC(839), [Sitting Sickness](#) : CK(95) : AC(13)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Exercise](#) : CK(1223) : AC(191), [Exercise](#) : CK(1223) : AC(191), [Exercise](#) : CK(1223) : AC(191)

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## Long-term treadmill exercise could improve the spatial memory of the male APPswe/PS1dE9 AD mice.

**Pubmed Data** : Biol Sport. 2015 Nov ;32(4):295-300. Epub 2015 Aug 4. PMID: [26681831](#)

**Article Published Date** : Oct 31, 2015

**Authors** : J Y Xiong, S C Li, Y X Sun, X S Zhang, Z Z Dong, P Zhong, X R Sun

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Neurogenesis](#) : CK(59) : AC(30)

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## Moderate exercise delays the motor performance decline in a transgenic model of ALS.

**Pubmed Data** : Brain Res. 2010 Feb 8;1313:192-201. Epub 2009 Dec 5. PMID: [19968977](#)

**Article Published Date** : Feb 08, 2010

**Authors** : Isabel Carreras, Sinan Yuruker, Nurgul Aytan, Lokman Hossain, Ji-Kyung Choi, Bruce G Jenkins, Neil W Kowall, Alpaslan Dedeoglu

**Study Type** : Transgenic Animal Study

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Physical activity reduces the long-term risk of dementia, especially Alzheimer's disease.

**Pubmed Data** : Eur J Epidemiol. 2016 Mar ;31(3):267-74. Epub 2016 Feb 8. PMID: [26857126](#)

**Article Published Date** : Feb 29, 2016

**Authors** : Hiro Kishimoto, Tomoyuki Ohara, Jun Hata, Toshiharu Ninomiya, Daigo Yoshida, Naoko

Mukai, Masaharu Nagata, Fumie Ikeda, Masayo Fukuhara, Shuzo Kumagai, Shigenobu Kanba, Takanari Kitazono, Yutaka Kiyohara

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Physical exercise is beneficial in the prevention of Alzheimer's disease and other age-associated neurodegenerative disorders.

**Pubmed Data** : J Alzheimers Dis. 2010 ;20(3):777-83. PMID: [20182027](#)

**Article Published Date** : Dec 31, 2009

**Authors** : Zsolt Radak, Nikoletta Hart, Linda Sarga, Erika Koltai, Mustafa Atalay, Hideki Ohno, Istvan Boldogh

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Regular exercise may be an especially beneficial intervention to counteract cortical atrophy in all risk groups.

**Pubmed Data** : J Int Neuropsychol Soc. 2015 Nov ;21(10):757-67. PMID: [26581788](#)

**Article Published Date** : Oct 31, 2015

**Authors** : Katherine Reiter, Kristy A Nielson, Theresa J Smith, Lauren R Weiss, Alfonso J Alfini, J Carson Smith

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Regular exercise may slow the rate of functional deterioration in mild AD and reduce falls in patients suffering from advanced AD.

**Pubmed Data** : Dement Geriatr Cogn Disord. 2016 ;41(3-4):233-41. Epub 2016 May 10. PMID: [27160164](#)

**Article Published Date** : Dec 31, 2015

**Authors** : Hannareeta Öhman, Niina Savikko, Timo Strandberg, Hannu Kautiainen, Minna Raivio, Marja-Liisa Laakkonen, Reijo Tilvis, Kaisu H Pitkälä

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Regular physical exercise reinforces antioxidative capacity, reduces oxidative stress, and has anti-inflammatory effects

**Pubmed Data** : Endocrine. 2016 May 9. Epub 2016 May 9. PMID: [27160819](#)

**Article Published Date** : May 08, 2016

**Authors** : Sebastian Bertram, Klara Brixius, Christian Brinkmann

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Diabetes: Oxidative Stress](#) : CK(129) : AC(39) , [Diabetes Mellitus: Type 2](#) : CK(3344) : AC(592) , [Dyslipidemias](#) : CK(389) : AC(74) , [Inflammation](#) : CK(2863) : AC(839)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Anti-Inflammatory Agents](#) : CK(4499) : AC(1573) , [Antioxidants](#) : CK(7191) : AC(2630)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Running exercise could prevent disease progression in animals.

**Pubmed Data** : J Alzheimers Dis. 2016 May 6. Epub 2016 May 6. PMID: [27163797](#)

**Article Published Date** : May 05, 2016

**Authors** : Ewelina Maliszewska-Cyna, Kristiana Xhima, Isabelle Aubert

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## Several trials with elderly individuals and patients with neurodegenerative diseases report exercise induced

## cognitive improvements.

**Pubmed Data** : Expert Rev Neurother. 2016 May 6:1-12. Epub 2016 May 6. PMID: [27086703](#)

**Article Published Date** : May 05, 2016

**Authors** : Carlos Campos, Nuno Barbosa F Rocha, Eduardo Lattari, Flávia Paes, António E Nardi, Sérgio Machado

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Parkinson's Disease](#) : CK(525) : AC(163)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## The current knowledge supports physical activity as an important preventive factor against the onset of both Alzheimer's and Parkinson's diseases.

**Pubmed Data** : J Clin Neurol. 2015 Jul ;11(3):212-9. PMID: [26174783](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Thierry Paillard, Yves Rolland, Philippe de Souto Barreto

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375) , [Parkinson's Disease](#) : CK(525) : AC(163)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191) , [Exercise: Aerobic](#) : CK(147) : AC(17)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631) , [Neuroprotective Agents](#) : CK(2235) : AC(1052), [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## The protective effect of regular exercise can be a promising therapeutic measure for countering or delaying the AD-like pathology.

**Pubmed Data** : Mol Neurobiol. 2015 Dec 12. Epub 2015 Dec 12. PMID: [26660327](#)

**Article Published Date** : Dec 11, 2015

**Authors** : An T Dao, Munder A Zagaar, Amber T Levine, Karim A Alkadhi

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## These findings suggest that exercise might play an important role in the prevention of Alzheimer's disease.

**Pubmed Data** : J Int Neuropsychol Soc. 2015 Nov ;21(10):841-50. PMID: [26581795](#)

**Article Published Date** : Oct 31, 2015

**Authors** : Stephanie A Schultz, Elizabeth A Boots, Rodrigo P Almeida, Jennifer M Oh, Jean Einerson, Claudia E Korcarz, Dorothy F Edwards, Rebecca L Kosciak, Maritza N Dowling, Catherine L Gallagher, Barbara B Bendlin, Bradley T Christian, Henrik Zetterberg, Kaj Blennow, Cynthia M Carlsson, Sanjay Asthana, Bruce P Hermann, Mark A Sager, Sterling C Johnson, James H Stein, Ozioma C Okonkwo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## This meta-analysis suggests that physical activity interventions positively influence cognitive function in patients with dementia.

**Pubmed Data** : Ageing Res Rev. 2016 Jan ;25:13-23. Epub 2015 Nov 28. PMID: [26607411](#)

**Article Published Date** : Dec 31, 2015

**Authors** : C Groot, A M Hooghiemstra, P G H M Raijmakers, B N M van Berckel, P Scheltens, E J A Scherder, W M van der Flier, R Ossenkoppele

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191), [Exercise: Aerobic](#) : CK(147) : AC(17)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Risk Reduction](#) : CK(6136) : AC(658)

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## This review highlights current evidence supporting the disease-altering potential of PA and exercise through modifications of neuroimmune responses.

**Pubmed Data** : Brain Res Bull. 2016 Mar 26 ;125:19-29. Epub 2016 Mar 26. PMID: [27021169](#)

**Article Published Date** : Mar 25, 2016

**Authors** : Lindsay Joy Spielman, Jonathan Peter Little, Andis Klegeris

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376), [Brain Inflammation](#) : CK(246) : AC(140),

Depressive Disorder : CK(405) : AC(57) , Parkinson's Disease : CK(525) : AC(163) , Schizophrenia : CK(434) : AC(68)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

**Additional Keywords** : Exercise : CK(1223) : AC(191)

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## Treadmill ambulation is feasible, tolerated and safe for patients for amyotrophic lateral sclerosis.

**Pubmed Data** : Arch Phys Med Rehabil. 2010 Dec;91(12):1920-9. PMID: [21112435](#)

**Article Published Date** : Dec 01, 2010

**Authors** : Mohammed Sanjak, Elena Bravver, William L Bockenek, H James Norton, Benjamin R Brooks

**Study Type** : Human Study

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

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## Treadmill running and rutin could improve high fat diet induced cognitive impairment.

**Pubmed Data** : J Nutr Health Aging. 2016 ;20(5):503-8. PMID: [27102787](#)

**Article Published Date** : Dec 31, 2015

**Authors** : J Cheng, L Chen, S Han, L Qin, N Chen, Z Wan

**Study Type** : Animal Study

**Additional Links**

**Substances** : Rutin : CK(126) : AC(48)

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

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## Voluntary exercise produces a lasting protective state in the hippocampus.

**Pubmed Data** : J Alzheimers Dis. 2016 Mar 16 ;52(1):333-43. PMID: [27003207](#)

**Article Published Date** : Mar 15, 2016

**Authors** : Arturo G Isla, Francisco Gabriel Vázquez-Cuevas, Fernando Peña-Ortega

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Therapeutic Actions** : Exercise : CK(1223) : AC(191)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

**Additional Keywords** : Risk Reduction : CK(6136) : AC(658)

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## Exercise: Aerobic (AC 5) (CK 42)

### Moderate intensity of aerobic exercise can improve cognitive function in patients with mild Alzheimer's disease.

**Pubmed Data** : CNS Neurol Disord Drug Targets. 2015 ;14(10):1292-7. PMID: [26556080](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Si-Yu Yang, Chun-Lei Shan, He Qing, Wei Wang, Yi Zhu, Meng-Mei Yin, Sergio Machado, Ti-Fei Yuan, Ting Wu

**Study Type** : Human Study

#### Additional Links

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Therapeutic Actions** : Exercise: Aerobic : CK(147) : AC(17) , Exercise: Cycling : CK(30) : AC(3)

### Omega-3 FA intake combined with aerobic exercise and cognitive stimulation prevents atrophy in AD-related brain regions in MCI patients.

**Pubmed Data** : Neuroimage. 2016 May 1 ;131:226-38. Epub 2015 Oct 1. PMID: [26433119](#)

**Article Published Date** : Apr 30, 2016

**Authors** : Theresa Köbe, A Veronica Witte, Ariane Schnelle, Anne Lesemann, Sonja Fabian, Valentina A Tesky, Johannes Pantel, Agnes Flöel

**Study Type** : Human Study

#### Additional Links

**Substances** : Omega-3 Fatty Acids : CK(3268) : AC(387)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375) , Cognitive Decline/Dysfunction : CK(1138) : AC(212)

**Therapeutic Actions** : Exercise: Aerobic : CK(147) : AC(17) , Integrative Medicine : CK(292) : AC(43)

**Pharmacological Actions** : Neuroprotective Agents : CK(2237) : AC(1053)

### Regular aerobic exercise can limit cognitive decline and the risk of dementia.

**Pubmed Data** : Sports Med Open. 2015;1(1):4. Epub 2015 Apr 17. PMID: [26284161](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Thierry Paillard

**Study Type** : Review

**Additional Links**

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Exercise: Aerobic](#) : CK(147) : AC(17)

**Pharmacological Actions** : [Angiogenesis Inducing Agents](#) : CK(2) : AC(1), [Neurogenesis](#) : CK(59) : AC(30)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## The current knowledge supports physical activity as an important preventive factor against the onset of both Alzheimer's and Parkinson's diseases.

**Pubmed Data** : J Clin Neurol. 2015 Jul ;11(3):212-9. PMID: [26174783](#)

**Article Published Date** : Jun 30, 2015

**Authors** : Thierry Paillard, Yves Rolland, Philippe de Souto Barreto

**Study Type** : Review

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Parkinson's Disease](#) : CK(525) : AC(163)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191), [Exercise: Aerobic](#) : CK(147) : AC(17)

**Pharmacological Actions** : [Antioxidants](#) : CK(7192) : AC(2631), [Neuroprotective Agents](#) : CK(2235) : AC(1052), [Superoxide Dismutase Up-regulation](#) : CK(504) : AC(169)

**Additional Keywords** : [Risk Reduction](#) : CK(6136) : AC(658)

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## This meta-analysis suggests that physical activity interventions positively influence cognitive function in patients with dementia.

**Pubmed Data** : Ageing Res Rev. 2016 Jan ;25:13-23. Epub 2015 Nov 28. PMID: [26607411](#)

**Article Published Date** : Dec 31, 2015

**Authors** : C Groot, A M Hooghiemstra, P G H M Raijmakers, B N M van Berckel, P Scheltens, E J A Scherder, W M van der Flier, R Ossenkoppele

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212), [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Exercise](#) : CK(1223) : AC(191), [Exercise: Aerobic](#) : CK(147) : AC(17)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Additional Keywords** : [Neuroprotective Agents](#) : CK(2237) : AC(1053), [Risk Reduction](#) : CK(6136) : AC(658)

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## Exercise: Cycling (AC 1) (CK 10)

**Moderate intensity of aerobic exercise can improve cognitive function in patients with mild Alzheimer's disease.**

**Pubmed Data** : CNS Neurol Disord Drug Targets. 2015 ;14(10):1292-7. PMID: [26556080](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Si-Yu Yang, Chun-Lei Shan, He Qing, Wei Wang, Yi Zhu, Meng-Mei Yin, Sergio Machado, Ti-Fei Yuan, Ting Wu

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Therapeutic Actions** : [Exercise: Aerobic](#) : CK(147) : AC(17) , [Exercise: Cycling](#) : CK(30) : AC(3)

## Fasting/Caloric Restriction (AC 2) (CK 2)

**Dietary restriction may have neuroprotective effects in the aging brain.**

**Pubmed Data** : Brain Res. 2000 Dec 15;886(1-2):47-53. PMID: [11119686](#)

**Article Published Date** : Dec 15, 2000

**Authors** : M P Mattson

**Study Type** : Review

**Additional Links**

**Diseases** : [Aging](#) : CK(1581) : AC(428) , [Aging: Brain](#) : CK(246) : AC(84) , [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Therapeutic Actions** : [Fasting/Caloric Restriction](#) : CK(297) : AC(63)

**Pharmacological Actions** : [Antiproliferative](#) : CK(2461) : AC(1673) , [Neuroprotective Agents](#) : CK(2237) : AC(1053)

**Short-term fasting induces profound neuronal autophagy**

**Pubmed Data** : Autophagy. 2010 Aug ;6(6):702-10. Epub 2010 Aug 14. PMID: [20534972](#)

**Article Published Date** : Jul 31, 2010

**Authors** : Mehrdad Alirezaei, Christopher C Kemball, Claudia T Flynn, Malcolm R Wood, J Lindsay Whitton, William B Kiosses

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : [Neurodegenerative Diseases](#) : CK(3370) : AC(846)

**Therapeutic Actions** : [Fasting/Caloric Restriction](#) : CK(297) : AC(63)

**Pharmacological Actions** : [Autophagy Up-regulation](#) : CK(108) : AC(65), [Neurorestorative](#) : CK(71) : AC(21)

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## Integrative Medicine (AC 2) (CK 11)

**Omega-3 FA intake combined with aerobic exercise and cognitive stimulation prevents atrophy in AD-related brain regions in MCI patients.**

**Pubmed Data** : Neuroimage. 2016 May 1 ;131:226-38. Epub 2015 Oct 1. PMID: [26433119](#)

**Article Published Date** : Apr 30, 2016

**Authors** : Theresa Köbe, A Veronica Witte, Ariane Schnelle, Anne Lesemann, Sonja Fabian, Valentina A Tesky, Johannes Pantel, Agnes Flöel

**Study Type** : Human Study

**Additional Links**

**Substances** : [Omega-3 Fatty Acids](#) : CK(3268) : AC(387)

**Diseases** : [Alzheimer's Disease](#) : CK(1282) : AC(375), [Cognitive Decline/Dysfunction](#) : CK(1138) : AC(212)

**Therapeutic Actions** : [Exercise: Aerobic](#) : CK(147) : AC(17), [Integrative Medicine](#) : CK(292) : AC(43)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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**Supplementation of melatonin in combination with lower doses of AChEIs could be an interesting strategy for AD patients.**

**Pubmed Data** : Mol Neurobiol. 2015 Jun 17. Epub 2015 Jun 17. PMID: [26081146](#)

**Article Published Date** : Jun 16, 2015

**Authors** : I Buendia, E Parada, E Navarro, R León, P Negredo, J Egea, M G López

**Study Type** : In Vitro Study

**Additional Links**

**Substances** : [Melatonin](#) : CK(946) : AC(304)

**Diseases** : Alzheimer's Disease : CK(1282) : AC(375)

**Therapeutic Actions** : Integrative Medicine : CK(292) : AC(43)

**Pharmacological Actions** : Anti-Apoptotic : CK(360) : AC(201), Anti-Inflammatory Agents : CK(4499) : AC(1573), Neuroprotective Agents : CK(2235) : AC(1052)

**Additional Keywords** : Dose Response : CK(1035) : AC(400), Natural Substance/Drug Synergy : CK(349) : AC(140)

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## Intermittent Hypoxia (low oxygen) (AC 1) (CK 2)

**Linking respiratory chain uncoupling to amyotrophic lateral sclerosis implies potential treatment with herbal extracts containing genipin.**

**Pubmed Data** : Med Hypotheses. 2013 Mar ;80(3):327. Epub 2012 Dec 21. PMID: [23265356](#)

**Article Published Date** : Feb 28, 2013

**Authors** : M Hoffmann

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Intermittent Hypoxia (low oxygen) : CK(2) : AC(1), Stem Cell Related Therapy : CK(10) : AC(2)

**Additional Keywords** : Plant Extracts : CK(7290) : AC(2420)

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## Laughter/Humor (AC 1) (CK 10)

**Humor therapy decreases agitation and also showed that it increases happiness in nursing home residents.**

**Pubmed Data** : J Am Med Dir Assoc. 2014 Aug ;15(8):564-9. Epub 2014 May 9. PMID: [24814320](#)

**Article Published Date** : Jul 31, 2014

**Authors** : Lee-Fay Low, Belinda Goodenough, Jennifer Fletcher, Kenny Xu, Anne-Nicole Casey,

Lynn Chenoweth, Richard Fleming, Peter Spitzer, Jean-Paul Bell, Henry Brodaty

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Dementia](#) : CK(571) : AC(79), [Quality of Life: Poor](#) : CK(438) : AC(45)

**Therapeutic Actions** : [Laughter/Humor](#) : CK(178) : AC(23)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3018) : AC(364)

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## Light Therapy (AC 1) (CK 2)

**Near-infrared light prevents the neurotoxic effects of rotenone and may be used in the treatment of neurodegenerative disorders associated with mitochondrial dysfunction.**

**Pubmed Data** : J Neurosci. 2008 Dec 10;28(50):13511-21. PMID: [19074024](#)

**Article Published Date** : Dec 10, 2008

**Authors** : Julio C Rojas, Jung Lee, Joseph M John, F Gonzalez-Lima

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Mitochondrial Dysfunction](#) : CK(224) : AC(90), [Neurodegenerative Diseases](#) : CK(3370) : AC(846), [Optic Nerve Diseases](#) : CK(5) : AC(3), [Optical Neuropathy](#) : CK(2) : AC(1)

**Therapeutic Actions** : [Light Therapy](#) : CK(124) : AC(28)

**Pharmacological Actions** : [Neuroprotective Agents](#) : CK(2237) : AC(1053)

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## Light-Emitting Diodes (LEDs) Therapy (AC 1) (CK 3)

**Transcranial LED therapy increased the cerebral blood flow in an elderly women.**

**Pubmed Data** : Lasers Med Sci. 2015 Jan ;30(1):339-46. Epub 2014 Oct 3. PMID: [25277249](#)

**Article Published Date** : Dec 31, 2014

**Authors** : Afonso S I Salgado, Renato A Zângaro, Rodolfo B Parreira, Ivo I Kerppers

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Light-Emitting Diodes \(LEDs\) Therapy](#) : CK(180) : AC(41)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

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## Loving (AC 1) (CK 10)

**Some behavioural and/or psychological features associated with falling in love could be related to raised neural growth factor (NGF) levels in the bloodstream.**

**Pubmed Data** : Psychoneuroendocrinology. 2006 Apr;31(3):288-94. Epub 2005 Nov 10. PMID: [16289361](#)

**Article Published Date** : Apr 01, 2006

**Authors** : Enzo Emanuele, Pierluigi Politi, Marika Bianchi, Piercarlo Minoretti, Marco Bertona, Diego Geroldi

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Demyelinating Diseases](#) : CK(1671) : AC(332) , [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Therapeutic Actions** : [Loving](#) : CK(10) : AC(1)

**Pharmacological Actions** : [Neuritogenic](#) : CK(133) : AC(59)

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## Massage/Therapeutic Touch (AC 3) (CK 30)

**Reflexology may limit further deterioration or maintain improvement of wellbeing in Parkinson's disease patients.**

**Pubmed Data** : Complement Ther Clin Pract. 2010 May;16(2):96-100. Epub 2009 Nov 4. PMID: [20347841](#)

**Article Published Date** : May 01, 2010

**Authors** : Christopher Johns, Debbie Blake, Alan Sinclair

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

**Therapeutic Actions** : [Massage/Therapeutic Touch](#) : CK(810) : AC(81)

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## Therapeutic touch educes agitated behavior and cortisol in persons with Alzheimer's disease.

**Pubmed Data** : Biol Res Nurs. 2002 Oct;4(2):104-14. PMID: [12408216](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Diana Lynn Woods, Margaret Dimond

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376) , [High Cortisol](#) : CK(542) : AC(63)

**Therapeutic Actions** : [Massage/Therapeutic Touch](#) : CK(810) : AC(81)

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## Therapeutic touch significantly reduces stress-associated behavioral symptoms in subjects with dementia.

**Pubmed Data** : Forsch Komplementmed. 2009 Jun;16(3):181-9. Epub 2009 Jun 5. PMID: [19657203](#)

**Article Published Date** : Jun 01, 2009

**Authors** : Diana Lynn Woods, Cornelia Beck, Karabi Sinha

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Dementia](#) : CK(571) : AC(79) , [Stress](#) : CK(621) : AC(102)

**Therapeutic Actions** : [Massage/Therapeutic Touch](#) : CK(810) : AC(81)

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## Melodic Intonation Therapy (AC 2) (CK 2)

In this study mental singing showed a positive effect on parkinsonian gait.

**Pubmed Data** : Brain Nerve. 2011 Dec ;63(12):1370-7. PMID: [22147456](#)

**Article Published Date** : Nov 30, 2011

**Authors** : Masayuki Satoh

**Study Type** : Review

**Additional Links**

**Diseases** : Aphasia : CK(113) : AC(19), Apraxias : CK(11) : AC(2), Dementia : CK(571) : AC(79), Parkinson's Disease : CK(525) : AC(163), Stroke: Attenuation/Recovery : CK(345) : AC(74)

**Therapeutic Actions** : Melodic Intonation Therapy : CK(58) : AC(1), Music : CK(412) : AC(47)

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## Melodic intonation therapy and related vocal techniques can improve expressive dysphasia and aid rehabilitation of neurologic disorders.

**Pubmed Data** : Tidsskr Nor Laegeforen. 2004 Dec 16 ;124(24):3229-30. PMID: [15608775](#)

**Article Published Date** : Dec 15, 2004

**Authors** : Audun Myskja

**Study Type** : Review

**Additional Links**

**Diseases** : Dysphasia : CK(1) : AC(1), Neurodevelopmental Disorders : CK(179) : AC(24), Parkinson's Disease : CK(525) : AC(163), Stroke: Attenuation/Recovery : CK(345) : AC(74)

**Therapeutic Actions** : Melodic Intonation Therapy : CK(58) : AC(1)

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## Music (AC 4) (CK 41)

### In this study mental singing showed a positive effect on parkinsonian gait.

**Pubmed Data** : Brain Nerve. 2011 Dec ;63(12):1370-7. PMID: [22147456](#)

**Article Published Date** : Nov 30, 2011

**Authors** : Masayuki Satoh

**Study Type** : Review

**Additional Links**

**Diseases** : Aphasia : CK(113) : AC(19), Apraxias : CK(11) : AC(2), Dementia : CK(571) : AC(79), Parkinson's Disease : CK(525) : AC(163), Stroke: Attenuation/Recovery : CK(345) : AC(74)

**Therapeutic Actions** : Melodic Intonation Therapy : CK(58) : AC(1), Music : CK(412) : AC(47)

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### Music therapy exerted a moderately large effect on

## disruptive behaviours of people with dementia, a moderate effect on anxiety levels and depressive moods.

**Pubmed Data** : J Clin Nurs. 2015 Aug 24. Epub 2015 Aug 24. PMID: [26299594](#)

**Article Published Date** : Aug 23, 2015

**Authors** : Yu-Shiun Chang, Hsin Chu, Chyn-Yng Yang, Jui-Chen Tsai, Min-Huey Chung, Yuan-Mei Liao, Mei-Ju Chi, Megan F Liu, Kuei-Ru Chou

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Therapeutic Actions** : [Music](#) : CK(412) : AC(47)

**Pharmacological Actions** : [Anti-Anxiety Agents](#) : CK(334) : AC(56) , [Antidepressive Agents](#) : CK(988) : AC(158)

**Additional Keywords** : [Significant Treatment Outcome](#) : CK(3028) : AC(365)

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## Music therapy has a positive effect in treating anxiety and depression in patients suffering from Alzheimer's disease.

**Pubmed Data** : Encephale. 2009 Feb;35(1):57-65. Epub 2008 Feb 20. PMID: [19250995](#)

**Article Published Date** : Feb 01, 2009

**Authors** : S Guetin, F Portet, M-C Picot, C Defez, C Pose, J-P Blayac, J Touchon

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Music](#) : CK(412) : AC(47)

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## Music therapy improved some cognitive, psychological, and behavioural alterations in patients with Alzheimer disease.

**Pubmed Data** : Neurologia. 2016 Feb 17. Epub 2016 Feb 17. PMID: [26896913](#)

**Article Published Date** : Feb 16, 2016

**Authors** : M Gómez Gallego, J Gómez García

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Alzheimer's Disease](#) : CK(1283) : AC(376)

**Therapeutic Actions** : [Music](#) : CK(412) : AC(47)

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# Relaxation Therapy (AC 1) (CK 10)

## Relaxation guided imagery can dramatically reduce Parkinson's disease tremor.

**Pubmed Data** : Mov Disord. 2009 Oct 30;24(14):2059-62. PMID: [19768725](#)

**Article Published Date** : Oct 30, 2009

**Authors** : Ilana Schlesinger, Orna Benyakov, Ilana Erikh, Suheir Suraiya, Yitzhak Schiller

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164) , [Tremor](#) : CK(39) : AC(8)

**Therapeutic Actions** : [Relaxation Therapy](#) : CK(90) : AC(9)

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# Spiritual/Religious Practice (AC 1) (CK 10)

## Existential well-being, as well as spirituality issues, perceived by SALS patients seems to be directly related with quality of life, severity of mood disturbance and burden experienced by their caregivers.

**Pubmed Data** : Amyotroph Lateral Scler. 2011 Mar ;12(2):105-8. Epub 2010 Jul 26. PMID: [20653520](#)

**Article Published Date** : Feb 28, 2011

**Authors** : Francesco Pagnini, Christian Lunetta, Gabriella Rossi, Paolo Banfi, Ksenija Gorni, Nadia Cellotto, Gianluca Castelnovo, Enrico Molinari, Massimo Corbo

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Therapeutic Actions** : [Spiritual/Religious Practice](#) : CK(40) : AC(4)

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# Stem Cell Related Therapy (AC 4) (CK 15)

## Autologous bone marrow-derived stem cell therapy is safe and feasible in patients of ALS.

**Pubmed Data** : Neurol India. 2012 Sep-Oct;60(5):465-9. PMID: [23135021](#)

**Article Published Date** : Aug 31, 2012

**Authors** : Sudesh Prabhakar, Neelam Marwaha, Vivek Lal, Ratti R Sharma, Roopa Rajan, Niranjan Khandelwal

**Study Type** : Human Study

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Stem Cell Related Therapy : CK(10) : AC(2)

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## Intermittent hypoxia and stem cell implants preserve breathing capacity in a rodent model of amyotrophic lateral sclerosis.

**Pubmed Data** : Am J Respir Crit Care Med. 2013 Mar 1 ;187(5):535-42. Epub 2012 Dec 6. PMID: [23220913](#)

**Article Published Date** : Feb 28, 2013

**Authors** : Nicole L Nichols, Genevieve Gowing, Irawan Satriotomo, Lisa J Nashold, Erica A Dale, Masatoshi Suzuki, Pablo Avalos, Patrick L Mulcrone, Jacalyn McHugh, Clive N Svendsen, Gordon S Mitchell

**Study Type** : Review

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Stem Cell Related Therapy : CK(10) : AC(2)

**Pharmacological Actions** : Superoxide Dismutase Up-regulation : CK(504) : AC(169)

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## Linking respiratory chain uncoupling to amyotrophic lateral sclerosis implies potential treatment with herbal extracts containing genipin.

**Pubmed Data** : Med Hypotheses. 2013 Mar ;80(3):327. Epub 2012 Dec 21. PMID: [23265356](#)

**Article Published Date** : Feb 28, 2013

**Authors** : M Hoffmann

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Intermittent Hypoxia (low oxygen) : CK(2) : AC(1) , Stem Cell Related Therapy : CK(10) : AC(2)

**Additional Keywords** : Plant Extracts : CK(7290) : AC(2420)

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## Neural progenitors derived from human induced pluripotent stem cells survive and differentiate upon transplantation into a rat model of amyotrophic lateral sclerosis.

**Pubmed Data** : Stem Cells Transl Med. 2013 Mar ;2(3):167-74. Epub 2013 Feb 14. PMID: [23413376](#)

**Article Published Date** : Feb 28, 2013

**Authors** : Iuliana Ristea Popescu, Charles Nicaise, Song Liu, Grégoire Bisch, Sarah Knippenberg, Valery Daubie, Delphine Bohl, Roland Pochet

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Amyotrophic Lateral Sclerosis : CK(567) : AC(140)

**Therapeutic Actions** : Stem Cell Related Therapy : CK(10) : AC(2)

**Pharmacological Actions** : Superoxide Dismutase Up-regulation : CK(504) : AC(169)

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## Sunlight exposure (AC 1) (CK 10)

### Sunlight exposure ameliorates osteoporosis and vitamin D deficiency in hospitalized, elderly women with Alzheimer's disease.

**Pubmed Data** : J Bone Miner Res. 2005 Aug;20(8):1327-33. Epub 2005 Apr 4. PMID: [16007329](#)

**Article Published Date** : Aug 01, 2005

**Authors** : Yoshihiro Sato, Jun Iwamoto, Tomohiro Kanoko, Kei Satoh

**Study Type** : Human Study

**Additional Links**

**Diseases** : Alzheimer's Disease : CK(1283) : AC(376) , Elderly: Age Specific Diseases : CK(442) : AC(38), Osteoporosis : CK(1276) : AC(241)

**Therapeutic Actions** : Sunlight exposure : CK(455) : AC(49)

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## Tai Chi (AC 2) (CK 20)

**"Tai chi training appears to reduce balance impairments in patients with mild-to-moderate Parkinson's disease, with additional benefits of improved functional capacity and reduced falls."**

**Pubmed Data** : N Engl J Med. 2012 Feb 9 ;366(6):511-9. PMID: [22316445](#)

**Article Published Date** : Feb 09, 2012

**Authors** : Fuzhong Li, Peter Harmer, Kathleen Fitzgerald, Elizabeth Eckstrom, Ronald Stock, Johnny Galver, Gianni Maddalozzo, Sara S Batya

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164) , [Posture Disorders](#) : CK(30) : AC(3)

**Therapeutic Actions** : [Tai Chi](#) : CK(544) : AC(52)

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**Tai Chi appears to be an appropriate, safe and effective form of exercise for some individuals with mild-moderately severe Parkinson disease.**

**Pubmed Data** : Gait Posture. 2008 Oct;28(3):456-60. Epub 2008 Apr 18. PMID: [18378456](#)

**Article Published Date** : Oct 01, 2008

**Authors** : Madeleine E Hackney, Gammon M Earhart

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Parkinson's Disease](#) : CK(526) : AC(164)

**Therapeutic Actions** : [Tai Chi](#) : CK(544) : AC(52)

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## Therapeutic Breathing (AC 1) (CK 10)

**Diaphragm training has value in amyotrophic lateral sclerosis.**

**Pubmed Data** : J Clin Neuromuscul Dis. 2008 Dec ;10(2):56-60. PMID: [19169091](#)

**Article Published Date** : Nov 30, 2008

**Authors** : Rachel Nardin, Carl O'Donnell, Stephen H Loring, Rui Nie, Kristi Hembre, Joy Walsh, Barbara Wilson Arboleda, Alona Muzikansky, Dang Nguyen, Elizabeth Raynor

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Therapeutic Actions** : [Therapeutic Breathing](#) : CK(182) : AC(20)

## Category : Problematic Actions

### Electromagnetic Fields (AC 2) (CK 22)

**900 MHz radiation emitted from mobile/cellular phones can be an agent to alter some biomolecules such as brain protein.**

**Pubmed Data** : Electromagn Biol Med. 2012 Jan 23. Epub 2012 Jan 23. PMID: [22268730](#)

**Article Published Date** : Jan 23, 2012

**Authors** : Suleyman Dasdag, Mehmet Zulkuf Akdag, Goksel Kizil, Murat Kizil, Dilek Ulker Cakir, Beran Yokus

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Cell Phone Induced Disease](#) : CK(16) : AC(4) , [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Additional Keywords** : [Undefined](#) : CK(14) : AC(3)

**Anti Therapeutic Actions** : [Electromagnetic Fields](#) : CK(164) : AC(25)

**Problem Substances** : [Cell Phone Exposure](#) : CK(19) : AC(4)

**There is an association between occupational exposure to power frequency electromagnetic fields and amyotrophic lateral sclerosis.**

**Pubmed Data** : Am J Ind Med. 2003 Feb;43(2):212-20. PMID: [12541277](#)

**Article Published Date** : Feb 01, 2003

**Authors** : Chung-Yi Li, Fung-Chang Sung

**Study Type** : Meta Analysis

**Additional Links**

**Diseases** : [Amyotrophic Lateral Sclerosis](#) : CK(567) : AC(140)

**Anti Therapeutic Actions** : [Electromagnetic Fields](#) : CK(164) : AC(25)

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## Nanotechnology (AC 1) (CK 2)

**Nanoparticles may have potential neurotoxicity.**

**Pubmed Data** : J Reprod Med. 2002 Oct;47(10):821-4. PMID: [20433914](#)

**Article Published Date** : Oct 01, 2002

**Authors** : Yu-Lan Hu, Jian-Qing Gao

**Study Type** : Animal Study

**Additional Links**

**Diseases** : [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Anti Therapeutic Actions** : [Nanotechnology](#) : CK(70) : AC(31)

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## Overdiagnosis (AC 1) (CK 10)

**An overdiagnosis of dementia occurs in 41% young patients according to this study.**

**Pubmed Data** : Dement Geriatr Cogn Disord. 2012 Nov 30 ;34(5-6):292-299. Epub 2012 Nov 30. PMID: [23208125](#)

**Article Published Date** : Nov 29, 2012

**Authors** : L C Salem, B B Andersen, T R Nielsen, J Stokholm, M B Jørgensen, M H Rasmussen, G Waldemar

**Study Type** : Human Study

**Additional Links**

**Diseases** : [Dementia](#) : CK(571) : AC(79)

**Anti Therapeutic Actions** : [Overdiagnosis](#) : CK(10) : AC(1)

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# Western Diet (AC 1) (CK 2)

## Western style diet impairs entrance of the neuroprotective blood-borne insulin-like growth factor-1 into the brain.

**Pubmed Data** : Neuromolecular Med. 2007;9(4):324-30. Epub 2007 Sep 5. PMID: [17999206](#)

**Article Published Date** : Jan 01, 2007

**Authors** : Marcelo O Dietrich, Alexandre Muller, Marta Bolos, Eva Carro, Marcos L Perry, Luis V Portela, Diogo O Souza, Ignacio Torres-Aleman

**Study Type** : Animal Study

### **Additional Links**

**Diseases** : [Neurodegenerative Diseases](#) : CK(3376) : AC(850)

**Anti Therapeutic Actions** : [Western Diet](#) : CK(131) : AC(35)

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